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BULLETIN No. 154

POTENTIAL RECREATION AREAS ALONG THE CALIFORNIA AQUEDUCT

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JANUARY 1965

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

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1 Potential Recreation Areas Along the California Aqueduct

STATE OF CALIFORNIA—RESOURCES AGENCY

WILLIAM E. WARNE, Dir

DEPARTMENT OF WATER RESOURCES

P. O. BOX 388
SACRAMENTO

December 28, 1964

Honorable Edmund G. Brown, Governor,
and Members of the California
State Legislature
State Capitol
Sacramento, California

Gentlemen:

Transmitted herewith is a copy of Bulletin No. 154, entitled "Potential Recreation Areas Along the California Aqueduct", in accordance with Senate Resolution 54 adopted May 22, 1963. The bulletin reports on an evaluation of the desirability of and the engineering and economic feasibility of the 26 water-based potential recreation areas described in the report entitled "California's West Side Program", and on some suggested alternative water-based recreation developments.

The development of recreation areas in conjunction with the construction of the California Aqueduct will provide facilities for picnicking, camping, fishing, and other water-associated activities. Where the Department found such proposals to be feasible, it recommends that funds be provided for the acquisition and development of the recreation areas.

Sincerely yours,

William E. Warne

Director

State of California
The Resources Agency
Department of Water Resources

EDMUND G. BROWN, Governor
HUGO FISHER, Administrator, The Resources Agency
WILLIAM E. WARNE, Director, Department of Water Resources
ALFRED R. GOLZE, Chief Engineer
JOHN M. HALEY, Acting Assistant Chief Engineer

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SAN JOAQUIN VALLEY BRANCH

This report was prepared
under the direction of

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ACKNOWLEDGMENT

In the preparation of this report, the Department of Water Resources is grateful for the assistance provided by the Department of Parks and Recreation, the Department of Fish and Game, the United States Bureau of Reclamation, and the South San Joaquin Recreation Coordinating Committee.

CHAPTER I

INTRODUCTION AND SUMMARY

Introduction

The area extending from the Sacramento-San Joaquin Delta south through the west side of the San Joaquin Valley to the Tehachapi Mountains has a certain similarity throughout. It is for the most part flat and sparsely populated, summer temperatures often exceed 100 degrees, and existing recreation developments are limited.

The West Side Freeway, when completed, will greatly increase travel through this area, and with an attendant growth of local communities there will be an increased need for recreation facilities. The construction of the California Aqueduct, along a route approximately parallel to the freeway, presents an opportunity to provide recreation facilities which will serve the increased recreation demand of the area. Consideration for the property owners and economy of land acquisition require that land for recreation use be acquired in conjunction with the acquisition of land for the aqueduct.

During the 1962 Session, the California Legislature passed Senate Resolution No. 53. This resolution directed the Department of Water Resources and the Division of Highways, along with other state and federal agencies, to develop a coordinated plan for acquisition and development of property for freeway, aqueduct, and recreation uses on the west side of the San Joaquin Valley. The development of this plan was under the chairmanship of the Administrator of the Resources Agency of California. This coordinated plan is described in a published report of the Resources Agency, entitled "California's West Side Program", dated December 1962. The report identified 26 water-based potential recreation areas in association with reservoirs,

aquatic parks, and wildlife habitat; it recommended that these areas be carefully evaluated by the Departments of Water Resources, Parks and Recreation, and Fish and Game and by the U. S. Bureau of Reclamation; and the report further recommended that, upon completion of the evaluation, those areas should be developed where recreation is needed and the recreation plan is found to be feasible. The report stated that emphasis should be given in the evaluation to the following:

a. The Lost Hills-Tupman-Buena Vista area

b. The Kettleman City area

c. The Cottonwood-Poverty Flat area

d. Angling access to the aqueduct

Appendix A of this report contains the descriptions of the 26 water-based potential recreation areas as those descriptions appeared in "California's West Side Program".

During the 1963 Session of the Legislature, Senate Resolution No. 54 was passed which directs the Department of Water Resources, in cooperation with various agencies, to evaluate the 26 water-based potential recreation areas. The legislative directive is included in this report as Appendix B.

Planning for both recreation and for fish and wildlife was coordinated by the Department of Water Resources with the contract service units of the Department of Parks and Recreation and the Department of Fish and Game. Numerous other federal, state, and local agencies assisted in the preparation of the report.

An advisory committee was formed to provide local views and recommendations on the evaluation of the recreation proposals along the California Aqueduct in the South San Joaquin Division. The committee gave its approval

of the report and specifically recommended development of the Buena Vista site initially and the Tupman site as soon as the demand warrants. It further recommended that in the Department's land-use plan that consideration be given to wildlife habitat at the Tupman site.

Acknowledgments are made to the following members of the committee:

SOUTH SAN JOAQUIN
RECREATION COORDINATING COMMITTEE

Name	Agency
Vance A. Webb	Kern County Board of Supervisors
Pete Gianopulos	Kern County Water Agency
Wayne D. Odale	Kings County Board of Supervisors
Herbert J. Evans	Property Owner, Kern County
Lawrence Cloyd	State Department of Fish and Game
David Allan	State Department of Parks and Recreation
Robert J. Felton	State Department of Public Works
Carl L. Stetson	State Department of Water Resources

(Fred L. Jones is ex-officio member representing the office of the Administrator, The Resources Agency)

Summary

Based on investigation and review of the proposed projects, this report presents an evaluation of the 26 water-based potential recreation areas. It will be noted that in some instances an alternative proposal has been evaluated. In each instance what appeared to be the most feasible and suitable site was selected for evaluation.

Appendix D contains plates showing proposed development of sites having a desirable and feasible recreation potential. These plates were

prepared by the Department of Parks and Recreation as part of its preliminary report.

Investigation and evaluation of the 26 water-based potential recreation areas resulted in the following conclusions:

1. Tecuya Reservoir - This site is not recommended for acquisition since unfavorable geology and topography seriously limit its recreation potential.

2. Salt Creek Reservoir - This site is not recommended for acquisition since unfavorable geology and topography seriously limit its recreation potential.

3. Wheeler Ridge Park - This proposal has a desirable and feasible recreation potential and is recommended for acquisition and development as a fishing access site.

4. Buena Vista Reservoir - This proposal has a desirable and feasible recreation potential and is recommended for acquisition and development.

5. Tupman Aquatic Park - The modified proposal is desirable and feasible for recreation purposes and is recommended for acquisition. It is further recommended that development follow the development proposed at Buena Vista Reservoir.

6. Lost Hills Reservoir and Wildlife Area - This proposal is not recommended to be developed to provide recreation use only. If in the future, a multiple-use project can be developed in this vicinity, recreation and fish and wildlife uses should be included as a feature of the project.

7. Buttonwillow Aquatic Park - This proposal has a desirable and feasible recreation potential and is recommended for development as a fishing access site.

8. Lost Hills Park - This proposal has a desirable and feasible recreation potential and is recommended for acquisition and development as a fishing access site.

9. Avenal Gap Reservoir - This site is not recommended for acquisition since high construction cost caused by a conflict with Las Perillas Pumping Plant adversely affects its recreation potential.

10. La Porteria Reservoir - This site is not recommended for acquisition since unfavorable geology seriously limits its recreation potential.

11. Culebrino Reservoir - This site is not recommended for acquisition since unfavorable geology seriously limits its recreation potential.

12. Kettleman City Reservoirs and Wildlife Area - This site is not recommended for acquisition since unfavorable geology seriously limits its recreation potential. An alternative site in the area does provide desirable and feasible recreation potentials, however. The alternative site, Kettleman City Aquatic Park, is recommended for acquisition and development.

13. Zapato Reservoir
14. Jacalitos Reservoir
15. Warthan Reservoir
16. Los Gatos Reservoir
17. Cantua Creek Reservoir

Consideration should be given to the development of recreation facilities at these projects if the projects are developed.

18. Cottonwood Aquatic Park and Wildlife Area - This site is not recommended for acquisition since the recreation demand in this area would be met by San Luis Reservoir and Forebay.

19. Garzas Creek Reservoir - This site is not recommended for acquisition since the recreation demand in this area would be met by San Luis Reservoir and Forebay.

20. Poverty Flat Aquatic Park and Wildlife Area - This site is not recommended for acquisition since the recreation demand in this area would be met by San Luis Reservoir and Forebay.

21. Orestimba Reservoir - Because there will be no reservoir on Orestimba Creek, as formerly planned, a more desirable recreation site is proposed at Ingram Creek. The alternative site is desirable and feasible; it is thus recommended for acquisition and development.

22. Del Puerto Canyon Reservoir - This site is not recommended for acquisition since the high cost of construction does not justify its use as a single-purpose project.

23. Use of Wasteways - No wasteways are proposed for the California Aqueduct except in the San Luis Division where they are under consideration by the U. S. Bureau of Reclamation.

24. Canalside Wildlife Habitat Development - This area has a desirable and feasible recreation potential and is recommended for development.

25. Aqueduct Angling Access Sites - These sites are recommended for acquisition since they constitute a desirable and feasible recreation potential. Development is recommended at Sperry Road, Three

Rocks, and Wheeler Ridge initially. As use and demand require, the other sites are recommended for development.

26. Drainage Project Wildlife Areas - Recreation potential of these areas warrants inclusion in the proposed plan of the San Joaquin Master Drain. Recreation planning in connection with the drain is described in Bulletin No. 127, entitled "San Joaquin Valley Drainage Investigation", January 1965, published by the Department of Water Resources.

The estimated use for the projects which have a desirable and feasible recreation potential are summarized in Table 1, "Estimated Recreation Use of Proposed Recreation Developments Along the California Aqueduct".

TABLE 1

ESTIMATED RECREATION USE OF PROPOSED RECREATION DEVELOPMENTS
ALONG THE CALIFORNIA AQUEDUCT
(in thousands of visitor-days annually)

	1970	1980	1990	2000	2010	2020
Fishing Access Sites[1]	80	118	187	256	343	400[2]
Kettleman City Aquatic Park	162	258	418	500[2]	500[2]	500[2]
Tupman Aquatic Park only	597	800[2]	800[2]	800[2]	800[2]	800[2]
Tupman Aquatic Park with competition from Buena Vista Reservoir	299	452	665	800[2]	800[2]	800[2]
Buena Vista Reservoir only	597	800[2]	800[2]	800[2]	800[2]	800[2]
Buena Vista Reservoir with competition from Tupman Aquatic Park	299	452	665	800[2]	800[2]	800[2]
Ingram Creek Aquatic Park	141	210	320	435	520[2]	520[2]

[1]Estimated combined visitor-use at all fishing access sites developed initially.
[2]Indicates saturated use of development.

The estimates of costs and benefits in this report although preliminary are adequate to determine the economic justification of these sites. More detailed estimates of costs will be made for the recreation

development plan at each site. The benefits of the aquatic parks and fishing access sites were based on values of $1.25 and $0.50, respectively, per visitor-day of use.

Equal annual equivalents of the costs and benefits at recommended sites are presented in Table 2, "Recreation and Fish and Wildlife Benefits and Incremental Costs at Recommended Sites Along the California Aqueduct".

TABLE 2

RECREATION AND FISH AND WILDLIFE BENEFITS AND INCREMENTAL[1] COSTS AT RECOMMENDED SITES ALONG THE CALIFORNIA AQUEDUCT

Site	Unit Benefit in Dollars Per Visitor-Day	Equal Annual Equivalent for the 50-year Period, 1968-2017, in Thousands of Dollars		Benefit-cost Ratio
		Benefits	Costs	
Buena Vista Reservoir	1.25	760	528	1.4:1
Tupman Aquatic Park	1.25	444	345	1.3:1
Kettleman City Aquatic Park	1.25	200	160	1.2:1
Ingram Creek	1.25	186	155	1.2:1
Fishing Access Site[2]	0.50	20	17	1.2:1

[1]Cost of adding recreation, fish and wildlife function to the California Aqueduct. Costs include capital outlay, annual operation, maintenance and replacement.

[2]Figures shown apply to each of the eight sites.

CHAPTER II

EVALUATION OF POTENTIALS

Geographical locations of the 26 water-based recreation areas and areas selected as alternative recreation development sites are shown on Plate 1. Those sites which have been found to be desirable and feasible for development for recreation use are also indicated on this plate. Evaluation of the recreation potential of each of the 26 water-based recreation areas described in Appendix A is reported in this chapter.

In the evaluation, three of the original proposals were referred to as parks; however, the name "fishing access site" is more appropriate and is used from here on in the text.

1. TECUYA RESERVOIR

The terrain around the proposed Tecuya Reservoir is steep with the slopes of the canyon walls ranging from 25 percent to over 70 percent. Most of the reservoir shoreline would be on such steep slopes that recreation use would be difficult or hazardous.

The streambed of Tecuya Creek is usually dry. High streamflows occur during occasional winter periods of heavy rain. The lack of a dependable water supply for the reservoir would require the importation of water from a supplemental source. The only supplemental water available in this area would be from the California Aqueduct. This supply would have to be conveyed four miles and pumped 1,000 feet above the proposed aqueduct and would result in high annual costs.

The Garlock, Pleito, White Wolf, and San Andreas earthquake faults lie within a ten-mile radius of the proposed site and seismic

activity is high. In 1952, the White Wolf fault registered a quake in excess of 7 on the Richter scale and has since been active to a lesser degree.

The steep slopes of the reservoir shoreline, the high annual costs for a water supply, and the high seismic activity of the area make it impractical to consider this reservoir site for recreation use.

2. SALT CREEK RESERVOIR

The proposed Salt Creek Reservoir lies about two miles west of Tecuya Reservoir in a section of Salt Creek where canyon walls rise with slopes ranging from 25 percent to 70 percent. Most of the reservoir shoreline would have little recreation value because of the steep slopes.

Except for high streamflows during winter storms, the streambed is usually dry. Similar to Tecuya Reservoir, the only supplemental water supply available in this area would be from the California Aqueduct and would have to be transported four miles and lifted approximately 1,000 feet. The annual costs to provide a water supply for this reservoir would be high.

The proposed site lies in an area of high seismic activity. Four major earthquake faults in the vicinity are the sources of numerous minor earthquakes each year.

The steep slopes of the reservoir shoreline, the high annual costs for a water supply, and the high seismic activity of the area make it impractical to consider this reservoir site for recreation use.

3. WHEELER RIDGE FISHING ACCESS SITE

The proposed site is located 30 miles south of Bakersfield at the intersection of the California Aqueduct and State Highway 166

in Section 11, Township 11 North, Range 21 West, San Bernardino Base and Meridian, Kern County. The site would have very good access from State Highway 99 and the future West Side Freeway which intersect about six miles to the east.

There is a need for water-associated recreation in the arid areas of Kern County, and this project would help to satisfy that need. The project would consist of about eight acres adjacent to the aqueduct, developed to provide shade trees, wildlife habitat, picnic facilities, fishing access to the California Aqueduct, parking, and sanitary facilities. Estimates of recreation use at proposed recreation developments along the California Aqueduct are shown in Table 1. The use at this site will approximate 10,000 visitor-days of use when the fishery is established in the aqueduct. It is believed that this fishery will be established within three to four years after the aqueduct is in use; therefore, this site should be developed for use by 1974.

The estimated incremental costs and benefits for recreation development at this site are shown in Table 2. The benefit-cost ratio is 1.2:1.

Recreation potential makes acquisition of this site advisable.

4. BUENA VISTA RESERVOIR

The proposed project is located in Sections 14, 22, 23, 26, 27, 34, and 35, Township 31 South, Range 24 East, Mount Diablo Base and Meridian, Kern County, on the western edge of the dry Buena Vista Lake bed. The site of the proposed reservoir is 30 miles southwest of Bakersfield and 10 miles northeast of Taft. The project area is adjacent to State Highway 119. The West Side Freeway will be about 10 miles north and will interchange with State Highway 119.

The proposed project would consist of about 2,000 acres for which facilities would be developed to provide use for camping, picnicking, fishing, swimming, boating, water skiing, and possibly hunting. The concept is for a reservoir of about 550 acres of water surface.

The predicted visitor use at this proposed development is shown in Table 1. If the recreation development is completed in 1971 the anticipated annual use will be 600,000 visitor-days and will reach saturated use of 800,000 visitor-days by the year 1980.

The estimated incremental costs and benefits for recreation development at this site are shown in Table 2. The benefit-cost ratio is 1.4:1.

Recreation use of this site is desirable and feasible. Acquisition and development of necessary land are recommended.

5. TUPMAN AQUATIC PARK

The proposed project is located in Sections 13, 14, 23, 24, and 25, Township 30 South, Range 24 East, and Sections 18, 19, and 30, Township 30 South, Range 25 East, Mount Diablo Base and Meridian, Kern County, 25 miles west of Bakersfield and adjacent to the town of Tupman.

Access to Tupman Road and the site of the proposed project is good from State Highway 119 and the future West Side Freeway which will interchange with Bellevue Avenue, about five miles from the site.

The proposed project would consist of about 1,000 acres developed to provide camping, parking, picnicking facilities, shade trees, and 540 acres of reservoir water surface. Consideration will also be given to the development of a wildlife habitat in conjunction

with potential recreation area No. 6 (Lost Hills Reservoir and Wildlife Area) and proposal No. 26 (Drainage Project Wildlife Areas).

The predicted visitor use at this proposed development is shown in Table 1. If the development is completed in 1980 the anticipated annual use will be 450,000 visitor-days and will reach saturated use by the year 2000.

The estimated incremental costs and benefits for recreation development at this site are shown in Table 2. The benefit-cost ratio is 1.3:1.

Recreation development of this site is desirable and feasible. Acquisition and development of necessary land are recommended.

6. LOST HILLS RESERVOIR AND WILDLIFE AREA

This project as proposed would require the acquisition of approximately 20,000 acres. Because of the high capital costs and low visitor use this project is not recommended for recreation development at this time. Interest has been shown by the Buena Vista Water Storage District in the construction of percolation ponds to recharge the ground water in this area. If such a project is developed, recreation facilities should be considered.

7. BUTTONWILLOW FISHING ACCESS SITE

The proposed site is located in Section 19, Township 29 South, Range 23 East, Mount Diablo Base and Meridian, Kern County, five miles west of Buttonwillow on State Highway 58. The West Side Freeway would be seven miles east of the recreation area.

The project would consist of about 22 acres of land, adjacent to the aqueduct, developed to provide shade trees, wildlife habitat,

picnic facilities, fishing access to the California Aqueduct, parking, and sanitary facilities. It is estimated that this development would receive a minimum annual use of 10,000 visitor-days initially. Table 2 shows estimated incremental costs and benefits of recreation development at a fishing access site which is typical of those proposed in this report.

There is a need for water-associated recreation in the arid areas of Kern County. This site would provide a fishing access to the California Aqueduct and picnicking for travelers and residents of this area. There is a recreation potential at this location and it should be acquired for recreation use. The benefit-cost ratio is 1.2:1.

8. LOST HILLS FISHING ACCESS SITE

The location of the site, as described in "California's West Side Program", would fall in the developed area of the community of Lost Hills. To provide an atmosphere usually associated with fishing and picnicking, an alternative site has been chosen for evaluation and is located about one mile south of Lost Hills in Section 2, Township 27 South, Range 21 East, Mount Diablo Base and Meridian, Kern County. The proposed West Side Freeway will be within three road miles of the site.

The project would consist of about 27 acres of land adjacent to the aqueduct, developed to provide shade trees, wildlife habitat, picnic facilities, fishing access to the aqueduct, parking, and sanitary facilities. It is estimated that this development would receive a minimum annual use of 10,000 visitor-days initially. Table 2 shows estimated incremental costs and benefits of recreation development at this site. The benefit-cost ratio is 1.2:1.

This site, if developed, would provide fishing and picnicking facilities which are not presently available in this part of the San Joaquin Valley. Acquisition and development of this site for recreation use are recommended.

9. AVENAL GAP RESERVOIR

The site for the proposed Avenal Gap Reservoir would conflict with plans for the Coastal Aqueduct. It would flood the Las Perillas Pumping Plant site and would require an additional pumping plant on the Coastal Aqueduct. This additional cost would therefore be charged to recreation. Water losses consisting of evaporation and percolation from the proposed reservoir would be excessive. Geologic conditions indicate the site would not be suitable for dam construction and corrective measures would be expensive.

This proposal is considered infeasible due to unfavorable geology and high costs, and therefore is not recommended for acquisition.

10. LA PORTERIA RESERVOIR

This site is located on an outcropping of the Tulare formation which comprises the main water-bearing strata in the valley to the east of the Kettleman Hills. Because of the high percolation rate of the earth formations in this area the site is considered geologically infeasible for water storage; therefore, it is not recommended for acquisition.

11. CULEBRINO RESERVOIR

The proposed reservoir site is located on an outcropping of the Tulare formation which comprises the main water-bearing strata of

the San Joaquin Valley. Because of the high rate of water percolation this site is considered infeasible for water storage; therefore, it is not recommended for acquisition.

12. KETTLEMAN CITY RESERVOIRS AND WILDLIFE AREA

Reservoirs constructed at the sites described in "California's West Side Program" would rest on the Tulare sand formation, which comprises the main water-bearing strata in the San Joaquin Valley. This would cause an extremely high percolation loss. Because of this an alternative site has been evaluated which consists of 440 acres between the California Aqueduct and the West Side Freeway in Sections 16 and 21, Township 23 South, Range 19 East, Mount Diablo Base and Meridian. The development at this site is referred to as the Kettleman City Aquatic Park.

A proposed interchange on the West Side Freeway, about 600 feet east of the site, would give access to Utica Avenue. These roads would provide easy access to the recreation site. Kettleman City is approximately 5.5 miles northwest of the site.

This area would be developed as needed to provide shade trees, wildlife habitat, overnight camping facilities, picnicking facilities, a swimming pond, fishing access to the aqueduct, parking space, and sanitary facilities.

The predicted visitor use at Kettleman City Aquatic Park is shown in Table 1. If this development is completed in 1968 the anticipated annual use will be about 160,000 visitor-days and will reach saturated use of 500,000 visitor-days by the year 2000.

The estimated incremental costs and benefits of recreation development are shown in Table 2. The benefit-cost ratio is 1.2:1.

Presently, there is no water-based recreation in the Kettleman City-Avenal Gap-Lost Hills area. There is a recreation potential at this site and it is recommended for acquisition and development for recreation use.

13. ZAPATO RESERVOIR
14. JACALITOS RESERVOIR
15. WARTHAN RESERVOIR
16. LOS GATOS RESERVOIR
17. CANTUA CREEK RESERVOIR

These reservoirs are in the joint-use portion of the California Aqueduct. The U. S. Bureau of Reclamation has the responsibility for investigating all potential flood control reservoirs in the joint-use area, which extends from Los Banos to Kettleman City.

Serious consideration should be given to possible inclusion of a recreation pool in these reservoirs should it be determined that the reservoirs are feasible for flood detention or for providing terminal storage in the Pleasant Valley area.

18. COTTONWOOD AQUATIC PARK AND WILDLIFE AREA

Preliminary geological information indicates that the soil and substrata in the vicinity of the proposed Cottonwood Aquatic Park and Wildlife Area appear to be unstable for construction of small impoundments.

A great part of the demand for water-associated recreation in this area will be satisfied by the recreation facilities provided at San Luis Reservoir and Forebay.

Because of these limitations it is not recommended that this site be acquired for recreation use.

19. GARZAS CREEK RESERVOIR

The proposed project is located in a relatively steep-sided canyon. The usable recreation land immediately adjacent to the reservoir consists of approximately 35 acres of small parcels of land scattered along the shoreline. The largest of these parcels is an area of approximately 12 acres located on the south shore of the reservoir.

Access to the proposed reservoir site would be available from the Peter Miller Road or Cottonwood Road and from an interchange on the West Side Freeway. An access road would have to be constructed around the southern edge of the proposed reservoir. None of the usable parcels of recreation land is large enough to justify the expense of constructing an access road.

Water would have to be pumped to the reservoir from the aqueduct because streamflow in Garzas Creek would not maintain a recreation pool.

Water-associated recreation demand in this area would be satisfied by facilities at the San Luis Reservoir and Forebay which is located some eight miles south.

For these reasons it is not recommended that this site be acquired for recreation use.

20. POVERTY FLAT AQUATIC PARK AND WILDLIFE AREA

The topography in the vicinity of the proposed Poverty Flat Aquatic Park and Wildlife Area would be suitable for recreation use; however, the water-associated recreation demand in this area should be

adequately satisfied by San Luis Reservoir and Forebay located ten miles to the south. Acquisition of this site for an aquatic park, therefore, is not recommended.

21. ORESTIMBA RESERVOIR

An analysis of the flood protection needs at the intersection of Orestimba Creek and the California Aqueduct shows that a siphon would provide the most economical flood protection for the aqueduct. The demand for water-associated recreation in this area should be adequately satisfied by San Luis Reservoir and Forebay and a proposed alternative development at the intersection of the aqueduct with Ingram Creek.

This alternative development is referred to as Ingram Creek Aquatic Park and is located in Section 36, Township 4 South, Range 6 East, Mount Diablo Base and Meridian about 3.5 miles west of Westley, Stanislaus County. It would consist of a 165-acre parcel of land developed as needed to provide picnic and sanitary facilities, a 10-acre recreation pond, fishing access to the aqueduct, parking space, shade trees, and wildlife habitat.

If this development is completed in 1968, the anticipated annual use will be about 140,000 visitor-days and will reach saturated use by the year 2010.

The estimated incremental costs and benefits of recreation development at Ingram Creek are shown in Table 2. The benefit-cost ratio is 1.2:1.

Recreation use of this site is desirable and feasible. Acquisition and development of necessary land are recommended.

22. DEL PUERTO CANYON RESERVOIR

An analysis of the flood protection needs for the California Aqueduct at Del Puerto Creek shows that a siphon would provide the most economical flood protection for the aqueduct. For this reason the recreation potential at Del Puerto Canyon Reservoir was not studied in detail since the reservoir is no longer part of the State Water Project.

23. USE OF WASTEWAYS

Wasteways are not presently planned for the California Aqueduct except in the San Luis Division where they are under consideration by the U. S. Bureau of Reclamation.

24. CANALSIDE WILDLIFE HABITAT DEVELOPMENT

Development of wildlife habitat along the aqueduct will provide conditions suitable for the production of thousands of quail, cottontail, pheasant, and dove which could be harvested either along the aqueduct or in adjacent areas. It will also increase the aesthetic value of the freeway and aqueduct.

Development of canalside wildlife habitat should begin after completion of the aqueduct and when water is available to support plant life. No land need be acquired specifically for this purpose. Planting of available areas within the aqueduct right-of-way should be done in conformance with the Department of Water Resources' requirements for operation and maintenance of the aqueduct.

25. AQUEDUCT ANGLING ACCESS SITES

A good fish population in the California Aqueduct would attract many fishermen. Steps should be taken to meet this potential

recreation demand. Other sections of this report recommend provisions for angling in the California Aqueduct at Wheeler Ridge Fishing Access Site, Buttonwillow Fishing Access Site, Lost Hills Fishing Access Site, Kettleman City Aquatic Park and Ingram Creek Aquatic Park. In addition to these sites, it is recommended that the following sites be acquired. When user demand requires it, these sites should be developed to provide picnic and sanitary facilities, parking space, shade trees, wildlife habitat, and angler access to the aqueduct.

1. Huron Fishing Access Site

   A 6-acre section of land bounded by the California Aqueduct, Siskiyou Avenue and Highway 198, Fresno County.

2. Three Rocks Fishing Access Site

   A 24-acre section of land adjacent to the west side of the California Aqueduct about one-third of a mile northwest of the intersection of the aqueduct and Highway 33, Fresno County.

3. Ora Loma Fishing Access Site

   A 15-acre section of land in the northwest quadrant of the intersection of the California Aqueduct with Russell Avenue, near the community of Ora Loma, Fresno County.

4. Sperry Road Fishing Access Site

   A 24-acre section of land located between the California Aqueduct and West Side Freeway, south of the intersection of the aqueduct with Sperry Road, and three miles west of the City of Patterson, Stanislaus County. The proposed development as shown on Plate 12 in Appendix C is for a

site studied by the Department of Parks and Recreation and does not correspond to the present proposed site between the aqueduct and freeway which will be available as a severed parcel.

5. Corral Hollow Road Fishing Access Site

   A 6-acre section of land in the northwest quadrant of the intersection of the California Aqueduct with Corral Hollow Road, five miles southwest of Tracy, San Joaquin County. This site was acquired under emergency acquisition procedures of the Department by authority of Section 346 of the Water Code.

Plates are included in Appendix D showing approximate locations and proposed initial development. Estimated incremental costs and benefits of these fishing access sites are shown in Table 2. The benefit-cost ratio of each is 1.2:1.

26. DRAINAGE PROJECT WILDLIFE AREAS

The proposed San Joaquin Master Drain has the potential for providing an excellent opportunity to develop a series of wildlife and recreation areas. The Department of Water Resources intends to design and operate the drainage facilities compatible with programs to preserve and enhance the fish and wildlife resources of the Valley.

During the next three years studies will be completed that will determine the best methods of using drain water in management of fish and wildlife areas and for recreation purposes.

CHAPTER III

PROGRAM OF DEVELOPMENT

The Davis-Dolwig Act (Water Code, Sections 11900-11925) authorizes a program designed to satisfy the predicted recreation demand that will emerge on the west side of the San Joaquin Valley as a result of California's West Side Program. It directs the Department of Water Resources to plan and develop recreation in connection with the State Water Facilities. To the extent possible, the acquisition of all lands and the location and construction of all recreation works and features must be accomplished to permit recreation use and fish and wildlife preservation and enhancement upon completion of the project. To meet this requirement, initial recreation facilities must be completed on a schedule coordinated with the completion schedule of the aqueduct. Facilities at fishing access sites, however, should be delayed until the fish population in the aqueduct has developed to provide satisfactory fishing. The Department of Fish and Game has indicated that about three years should be allowed to permit establishment of a fishery.

The schedule of water delivery at selected points along the California Aqueduct is shown below.

Schedule of Water Delivery

To	Date
San Luis Forebay	December 1967
Kettleman City Aquatic Park	January 1968
Buena Vista Reservoir	January 1971
Wheeler Ridge Fishing Access Site	January 1971

The dates of water delivery have been used to project the completion dates of the recreation facilities which the Department of Water Resources recommends for initial development.

In order that the Department may follow the procedures prescribed by the Legislature (Water Code Section 11900), the four aquatic parks which are recommended for development in Chapter IV should be completed by 1971. The demand for water-based recreation in the Tupman-Buena Vista area would justify the developments described in Chapter II at both Tupman and Buena Vista. In its request to the Legislature for funds the Department would propose that the Buena Vista recreation area be completed in 1971 and that the Tupman recreation area be completed prior to 1980.

The development of aquatic parks near Kettleman City and Ingram Creek would be completed in 1968, provided that funds are appropriated. The Department plans to stage the request of funds to develop fishing access sites. The Department would propose that initially funds be provided to develop three fishing access sites, one in each of the three divisions of the California Aqueduct.

Land acquisition for all the sites found desirable and feasible is estimated to cost $900,000. The estimated total initial capital outlay is $7,100,000 for recreation development at Buena Vista Reservoir, Kettleman City Aquatic Park, Ingram Creek Aquatic Park, and fishing access sites at Wheeler Ridge, Three Rocks, and Sperry Road.

Under the Department's present procedures, land is acquired for recreation development associated with state-constructed water projects by provisions of Section 346 of the Water Code. Acquisition of property must be approved by the Department of Finance. The Department of Water Resources prepares and submits reports under the general title of "Land

Use and Acquisition Plans" to obtain such approval. Actual acquisition of lands for recreation use will be initiated following the approval of a specific land use and acquisition plan by the Department of Finance.

Funds for development of onshore facilities at recreation projects must be obtained by legislative appropriation. The Department's reports published under the general title "Recreation Development Plan" are submitted to the Legislature pursuant to Section 345 of the Water Code. When possible, these reports are submitted to the Legislature at least two years prior to completion of the project.

In addition to wildlife habitat development along the California Aqueduct, the right-of-way has other recreation potential. The development of the aqueduct right-of-way should include consideration of an aqueduct trail system. This system would provide for horseback riding, bicycling, hiking, and other compatible activities.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluations of the 26 water-based potential recreation areas presented in "California's West Side Program", the following conclusions and recommendations are made.

Conclusions

The recreation facilities described in this report are geographically located so as to help provide for the recreation needs of the entire State. As the population increases in the San Joaquin Valley, these facilities especially will provide desirable recreational areas for people living in communities along the West Side Freeway and the California Aqueduct.

The methods used to determine feasibility are constantly being revised, and projects considered infeasible now may become feasible as criteria for evaluation change. Those of the sites considered in this study, but found not desirable or feasible at this time, should be reconsidered in the future at an appropriate time.

The Department of Water Resources should acquire the following sites under its present procedures of acquiring land for recreation development associated with State constructed water projects.

a. Buena Vista Reservoir

b. Tupman Aquatic Park

c. Kettleman City Aquatic Park

d. Ingram Creek Aquatic Park

e. Fishing Access Sites

(1) Wheeler Ridge
(2) Buttonwillow
(3) Lost Hills
(4) Huron
(5) Three Rocks
(6) Ora Loma
(7) Sperry Road

The following recreation sites described in this report should be initially developed:

a. Buena Vista Reservoir

b. Kettleman City Aquatic Park

c. Ingram Creek Aquatic Park

d. Fishing Access Sites

(1) Wheeler Ridge

(2) Three Rocks

(3) Sperry Road

The remaining sites, including the Corral Hollow Fishing Access Site which has already been acquired, should be developed to meet the increasing recreation demand as that demand materializes.

A canalside wildlife habitat planting program and an aqueduct trail system should be accomplished in conformance with the Department's requirements for operation and maintenance of the aqueduct.

Drainage water should be utilized for wildlife areas as recommended in the Department's Bulletin No. 127, entitled "San Joaquin Valley Drainage Investigation".

Recommendations

1. It is recommended that General Fund money be made available when appropriate to reimburse Project Funds expended in acquiring land for recreation purposes along the California Aqueduct.

2. It is further recommended that funds be made available when appropriate so that the initial development described in this report can be accomplished. Detailed reports substantiating requests for development of these recreation sites are under preparation by the Department of Water Resources.

Appendix A

The 26 Water-based Recreation Potentials Presented in the Report "California's West Side Program", published December 1962

1. Tecuya Reservoir

Location--Kern County, T. 10 N., R. 20 W., S.B.M., Secs. 25, 26, 35, and 36.

Description--This would cover approximately 200 surface acres with a dam height of approximately 85 feet. The site is located two miles west of Grapevine and four miles southwest of an interchange on Highway 99. Access would be good via the interchange already being built on Highway 99. Tecuya Creek would provide water for the reservoir, or water may be supplied from the California Aqueduct.

2. Salt Creek Reservoir

Location--Kern County, T. 10 N., R. 20 W., S.B.M., Sec. 21.

Description--This would cover approximately 200 acres with a dam height of approximately 80 feet. The area is located four miles west of Grapevine. Access would be good via the interchange already being built on U.S. Highway 99.

3. Wheeler Ridge Park

Location--Kern County, T. 11 N., R. 21 W., S.B.M., Sec. 11.

Description--This would be a day use park adjacent to the aqueduct, primarily to serve travelers on the Maricopa highway. Picnic facilities should be provided. This is one of the eight priority sites for possible angling access to the aqueduct.

4. Buena Vista Reservoir

Location--Kern County, T. 31 S., R. 21 E., M.D.M., Secs. 24 and 25.

Description--Years ago Buena Vista Lake was a very popular recreation area for fishing and boating. The lake has since been drained and reclaimed for farming. The closest body of water suitable for boating and fishing is now over 50 miles

away from the old lake bed. It is therefore felt that an impoundment site should be studied to fill the void left when Buena Vista Lake was drained.

Preliminary studies indicated that extensive diking would be required and cost would undoubtedly be quite high. Maximum water depth would be six to eight feet. The recreation potential would be restricted by the limited useable shoreline. Facilities should include boat launching and parking areas, swimming area, beach space, and picnic sites. Local residents would use such facilities intensively.

5. Tupman Aquatic Park

Location--Kern County, T. 30 S., R. 24 E., M.D.M., Secs. 14 and 15.

Description--This site appears to lend itself to development of an aquatic park. The California Aqueduct will parallel and bisect a portion of the Tule Elk Reserve State Park on its west side. The freeway will be located east of the park, the closest interchange being located approximately two miles from the headquarters. Major camping facilities should be located in this area.

A possible site for a 50-acre impoundment exists. Water depth would be about 25 feet at the maximum. Shade should be developed. Picnicking, fishing and swimming would be afforded. The recreation potential appears to be fairly high.

6. Lost Hills Reservoir and Wildlife Area

Location--Kern County, T. 27 S., and T. 28 S., R. 22 E.; T. 29 S., R. 23 E.; T. 29 S., and T. 30 S., R. 24 E.; M.D.M.

Description--The reservoir would be located in the Kern River flood channel immediately south of the junction of Highway 466 and the West Side Freeway. The dam height would be 25 feet at the channel with low levees on the east and west sides. Water depth would be from 15 feet in the channel to five feet near the shoreline. Some channel work would be necessary to protect and maintain a good fishery and to develop a suitable water sports

area. The reservoir would cover approximately 800 surface acres, and would be one-quarter mile wide by five miles long.

The wildlife area would extend from the upper end of the reservoir southerly to Tupman Road along the Kern River flood channel, a distance of approximately 23 miles. Check dams and channel enlargement would provide fishing and development of cover to provide an excellent upland game wildlife area. The water depth would be 5 feet to 15 feet, controlled by a series of small check dams to form a series of lagoons.

The project area would encompass all the land between the California Aqueduct and the levee road along the east bank of the Kern River flood channel, about 2,000 feet wide. Water would be supplied by the aqueduct and from drainage when available. Development of water service down the Kern River flood channel from the aqueduct would increase the feasibility of this project. Possibly the Kern National Wildlife Refuge could receive water delivery via this route.

The fisheries potential is excellent. The wildlife potential for quail, doves, rabbits and ducks is high. Natural cover is already established along land bordering the canal, and additional cover and food can be developed if water is supplied.

Access is readily available to a proposed West Side Freeway interchange at the junction of State Route 33.

Since this project would reduce the capacity of the existing flood channel additional flood control works might be needed.

We consider this to afford a high recreation potential, and consequently give it priority in importance for further study.

7. Buttonwillow Aquatic Park

Location--Kern County, T. 29 S., R. 23 E., M.D.M., Sec. 19.

Description--The potential here is construction of picnicking facilities alongside the aqueduct. These could be oriented around a small swimming area which could draw its water from the aqueduct, either by pipe

or by a subsidiary canal. This site is one of the eight given priority for study for fishing access to the aqueduct. Facilities would benefit travelers along the McKittrick-Bakersfield highway, and also local residents.

8. Lost Hills Park

Location--Kern County, T. 26 S., R. 21 E., M.D.M., Sec. 34.

Description--This would be a day use park with picnicking facilities adjacent to the aqueduct, primarily to serve travelers on the Paso Robles highway. This site is one of eight proposed for priority study for angling access to the aqueduct.

9. Avenal Gap Reservoir

Location--Kings County, T. 24 S., R. 19 E., M.D.M., Secs. 3, 9, 10, 11, 14, 15, and 16.

Description--This would be a reservoir of approximately 2,020 acres. The dam height would be approximately 65 feet. The dam crest would be approximately 5,000 feet long at elevation 375 feet. A small wing dam would also be required if built at that elevation. The lake would be approximately $2\frac{1}{2}$ miles long. The site is located three miles from the freeway and one-half mile from the aqueduct. There would be a vertical rise of 65 feet from the aqueduct to the 365-foot contour. This reservoir might also serve as a forebay for the Coastal Aqueduct. An additional low-lift pump would be necessary for the initial 65-foot lift into the forebay.

This potential must be weighed against the potentials for La Porteria Reservoir, Culebrino Reservoir and the Kettleman City Reservoirs and Wildlife Area for the most feasible project in the Kettleman City area. The committee feels that a recreation reservoir is needed in this general area.

10. La Porteria Reservoir

Location--Kings County, T. 23 S., R. 19 E., M.D.M., Secs. 28, 29, 30, 31, 32, and 33.

Description--This would have approximately 375 surface acres with a dam height of approximately 50 feet at the 400-foot contour. The length of the dam at the crest would be 2,500 feet. The site is located one mile from the aqueduct and two miles from the freeway.

11. Culebrino Reservoir

Location--Kings County, T. 23 S., R. 19 E., M.D.M., Secs. 16 and 17.

Description--This reservoir would cover approximately 300 surface acres. The dam height would be approximately 75 feet. The site is located adjacent to the aqueduct and freeway. Access would be good due to proximity to a freeway exchange. Plate 11 shows this in relation to other possibilities in the general area.

12. Kettleman City Reservoirs and Wildlife Area

Location--Kings County, T. 22 S., R. 18 E., M.D.M., Sec. 36; T. 22 S., R. 19 E., M.D.M., Secs. 29, 30, 31, and 32; T. 23 S., R. 19 E., M.D.M., Secs. 4, 5, 6, 8, and 9.

Description--Four small reservoir areas would be located on Arroyo Pino, Arroyo Estrecho and two smaller drainages to the south. The Arroyo Pino Reservoir would have 80 surface acres with a dam height of approximately 50 feet, and a crest length of approximately 500 feet. The Arroyo Estrecho Reservoir would have approximately 95 surface acres, a dam height of 75 feet, and a crest length of 1,000 feet. The third reservoir would contain 10 surface acres, have a dam height of 50 feet, and a crest length of 500 feet. The fourth reservoir would contain 20 surface acres, have a dam height of 50 feet, and a crest length of 500 feet.

Water would be provided from the aqueduct. A single water lift with a connecting ditch and/or conduit would supply water from one reservoir to the other and to the wildlife development areas below.

The wildlife area would be, beginning with the south half of Section 30, T. 22 S., R. 19 E., all land between the existing highway and the freeway to the point of intersection in Section 5, T. 23 S., R. 19 E. From that point south, it would include all lands between the freeway and aqueduct, ending on the section line common to Sections 9 and 16, T. 23 S., R. 19 E. It would total 915 acres.

Construction of ponds and development of cover and feed areas would benefit many species of wildlife.

The wildlife area is also well suited for a wayside park to serve freeway travelers (see chapter on "Needs of the Traveling Public", site number 5). In addition, there is potential for an aquatic park if ponds prove feasible.

This is one of the eight sites suggested for priority study for angling access to the aqueduct. See Plate 11 and Photo 4.

13. Zapato Reservoir

Location--Fresno County, T. 21 S., R. 16 E., M.D.M., Secs. 27, 28, 33, and 34; T. 22 S., R. 16 E., M.D.M., Secs. 3 and 4.

Description--This project consists of a potential flood control and recreation reservoir of approximately 320 surface acres. The dam height would be approximately 75 feet with a crest of approximately 2,500 feet in length at the 750-foot elevation. The reservoir would provide flood control capacity of 4,200 acre-feet, and total storage capacity of 5,975 feet.

This potential reservoir, and those in Jacalitos, Warthan and Los Gatos Creeks are under study by the Bureau of Reclamation for flood control of the Arroyo Pasajero into which they all drain. The Arroyo Pasajero crosses the aqueduct and freeway alignments in a broad channel. Should flood control by any of these reservoirs be found necessary, recreation potential should be considered also.

Should flood control reservoirs not be found necessary, we feel that recreation possibilities in these canyons surpass the scope of our study as being far removed and unrelated to the basic freeway and aqueduct facilities.

14. Jacalitos Reservoir

Location--Fresno County, T. 21 S., R. 15 E., M.D.M., Secs. 13, 14, 22, 23, 24, 26, and 27.

Description--This project consists of a potential flood control and recreational reservoir of approximately 620 surface acres. The dam height would be approximately 50 feet with a crest of approximately 2,500 feet in length, at the 730-foot elevation. This project would provide flood control of 3,700 acre-feet, with a total storage of 5,250 acre-feet.

See the last paragraph of the Zapato Reservoir potential for mention of limitations.

15. Warthan Reservoir

Location--Fresno County, T. 21 S., R. 14 E., M.D.M., Secs. 12, 13, 14, and 25; T. 21 S., R. 15 E., M.D.M., Secs. 7 and 18.

Description--The project consists of a potential flood control and recreational reservoir of approximately 400 surface acres. The dam height would be approximately 77 feet and the crest approximately 2,500 feet in length at the 850-foot elevation. The reservoir would provide flood control capacity of 6,300 acre-feet.

See the last paragraph of the Zapato Reservoir potential for limitations.

16. Los Gatos Reservoir

Location--Fresno County, T. 20 S., R. 14 E., M.D.M., Secs. 3, 4, 9, 10, 11, 14, and 15.

Description--This is a potential flood control and recreational reservoir, containing approximately 750 surface acres. The dam height would be approximately 73 feet, with a crest of approximately 4,000 feet in length at the 950-foot elevation. This project would provide flood control capacity of 7,400 acre-feet with a storage pool of 3,400 acre-feet.

See the last paragraph of the Zapato Reservoir potential for limitations.

17. Cantua Creek Reservoir

Location--Fresno County, T. 17 S., R. 14 E., M.D.M., Secs. 25, 26, 35, and 36; T. 18 S., R. 14 E., M.D.M., Sec. 2.

Description--This reservoir would have approximately 240 surface acres. The dam height would be approximately 90 feet at streambed. The dam crest would be approximately 3,300 feet long at elevation 650 feet. The lake would be approximately 1½ miles long. The site is two miles from the freeway and seven miles from the aqueduct. A proposed highway interchange is nearby. There would be a vertical rise of 313 feet from the aqueduct to the 640-foot contour.

18. Cottonwood Aquatic Park and Wildlife Area

Location--Merced County, T. 8 S., R. 8 E., M.D.M., Secs. 27, 28, and 34; T. 9 S., R. 8 E., M.D.M., Secs. 2, 3, 10, and 11.

Description--This potential project is for a combined aquatic park, wildlife, fishing and recreational area. It is located between the West Side Freeway and the California Aqueduct. The project area consists of a strip of land four miles long and one-fourth mile wide, with an area of approximately 640 acres. There are two potential impoundment sites with surface areas of approximately 20 and 40 acres, respectively, at elevation of 225 feet. The maximum water depth would be 25 feet at the 20-acre site and 35 feet at the 40-acre site.

Provisions for gravity flow water outlets along the California Aqueduct would supply necessary water for impoundments and development of wildlife habitat.

This potential should be considered in conjunction with the similar Poverty Flat Aquatic Park and Wildlife Area potential immediately to the north in evaluating the best location for an aquatic park and wildlife area in this general vicinity.

Access is available via the freeway exchange located two miles north at Sullivan Road and the overpass at Cottonwood Road allows local access into the center of the area.

19. Garzas Creek Reservoir

Location--Stanislaus County, T. 8 S., R. 7 E., M.D.M., Secs. 23 and 24.

Description--This potential project consists of a reservoir with approximately 240 surface acres. The dam height would be approximately 85 feet at a streambed elevation of 319 feet. Access is readily available from the Pete Miller Road or via a proposed interchange with the West Side Freeway.

20. Poverty Flat Aquatic Park and Wildlife Area

Location--Stanislaus County, T. 7 S., R. 8 E., M.D.M., Secs. 20, 28, 29, 32, and 33; T. 8 S., R. 8 E., M.D.M., Secs. 4, 5, and 9.

Description--This potential project is for an aquatic park, hunting, fishing, general recreation, and wildlife area located between the West Side Freeway and the California Aqueduct, and adjacent to the aqueduct on the western, uphill side. The area between the freeway and aqueduct consists of a strip of land $4\frac{1}{2}$ miles long, approximately $\frac{1}{2}$ mile wide, containing approximately 1,260 acres. Six sites would allow potential impoundments of 30 to 100 acres in size and 25 to 30 feet deep at the maximum, if developed as an aquatic park. Three of these would be between the aqueduct and freeway, and three above the aqueduct, using the canal bank as a dam.

Provisions for gravity flow water outlets along the California Aqueduct would supply water for the impoundments and development of wildlife habitat.

Access to this area would be good from Sullivan Road and Orestimba Road.

This potential should be considered in conjunction with the Cottonwood area just to the south in evaluating a possible aquatic park and wildlife area in this general vicinity.

21. Orestimba Reservoir

Location--Stanislaus County, T. 7 S., R. 7 E., M.D.M., Sec. 26.

Description--This potential project consists of an earthfill dam and reservoir of approximately 25,000 acre-feet capacity. The dam site is located on Orestimba Creek at streambed elevation of approximately 265 feet, and approximately .2 mile below Oso Creek.

This site was one of three considered for a Public Law 566 project which was dropped in 1961 as being unfavorable. The original project consisted of a reservation of approximately 5,000 acre-feet for flood control, 10,000 acre-feet for conservation and a 10,000 acre-foot minimum pool for fish and wildlife enhancement. The reservoir would receive runoff during the late winter months. Conservation storage would be released gradually during the summer months for underground percolation. The Department of Water Resources is currently studying flood protection needs at this site and at another site upstream.

22. Del Puerto Canyon Reservoir

Location--Stanislaus County, T. 5 S., R. 7 E., M.D.M., Secs. 20, 21, 28, and 29.

Description--This potential reservoir would have a dam height of approximately 110 feet, and a surface area of approximately 200 acres. Access would be good via a freeway interchange to be located at the Del Puerto Canyon Road junction with the West Side Freeway. There is a possible future highway development through Del Puerto Canyon to San Jose which could be routed along the edge of the reservoir, adding to the recreational aspects. This reservoir would also have flood control benefits and allow reduced structure size of the proposed siphon and road crossing.

23. Use of Wasteways

Should any wasteways be built along the aqueduct these should be developed as habitat for waterfowl and other wildlife. The San Luis Wasteway of the Delta-Mendota Canal is leased from the Bureau of Reclamation and successfully operated by the Department of Fish and Game for this purpose.

24. Canal Side Wildlife Habitat Development

The following general features beneficial to wildlife should be adopted along the aqueduct where feasible. These developments would increase wildlife numbers, enhance the esthetic value of the freeway and aqueduct, allow considerable recreational opportunities, and reduce possible wildlife and other losses.

a. Canal bank vegetative cover should be planted on the outside slopes of the aqueduct.
b. Severance areas and borrow pits should be retained and developed for wildlife.
c. Livestock and deerproof fences should be provided in areas where these uses occur to protect wildlife cover and food plots.
d. Trash guards should be placed at the upstream ends of siphons and constructed with horizontal metal grills or bars to allow animal life a means of escape. These should be placed in a manner which will force animals to one bank of the canal, thereby increasing escape possibilities.

25. Aqueduct Angling Access Sites

The California Aqueduct should provide an excellent fishery for game fish. There will be an enormous potential in the aqueduct for meeting fishing demands along the west side of the valley.

Eight sites are felt to have the greatest potential for initial development of public angling access. These are at the intersections of the following major highways with the aqueduct:

Kern County

1. Highway 166.
2. Highway 399.
3. Highway 178.
4. Highway 466.

Kings County

5. Highway 41.

Fresno County

6. Highway 198.
7. Highway 33.

Stanislaus County

8. West Side Freeway

Safety devices should be constructed in the aqueduct and prominently marked. Off-aqueduct parking areas and sanitary facilities should be developed for the convenience of anglers. Proposed park locations adjacent to the aqueduct can probably serve these purposes at some sites.

The initial program should be evaluated for success and adequacy. If warranted, additional sites should be developed. It is felt that for safety purposes the aqueduct should not be opened for fishing within one mile above checks, pumps, siphons or other structures.

This committee feels that the initial angling access sites should be selected from the eight sites listed and that the Department of Water Resources and the Bureau of Reclamation should carefully evaluate the success, with the aim of developing additional sites if warranted.

26. Drainage Project Wildlife Areas

The possible disposal of drain water through a series of evaporation basins, or use of regulation reservoirs, presents an excellent opportunity to develop a series of wildlife and recreational areas. Drain water unsuitable for agricultural purposes can be used to develop wildlife marshes, fishponds, and recreational areas. For maximum wildlife and recreational benefits, these basins should be at least 1,000 acres in size and the wildlife and recreation potentials should be fully developed.

Other drainage methods utilizing unregulated canals could provide wildlife or recreation development potential if the water were delivered to areas suitable for wildlife habitat and recreation development.

APPENDIX B

SENATE RESOLUTION NO. 54

Relating to water-based recreation facilities in connection with the California Aqueduct

SENATE RESOLUTION NO. 54

by Senator Williams

Relating to water-based recreation facilities in connection with the California Aqueduct

WHEREAS, The Administrator of the Resources Agency has submitted to the Legislature a report entitled "California's West Side Program" comprising a plan for acquisition and development of property for freeway, aqueduct and recreation uses on the west side of the San Joaquin Valley; and

WHEREAS, The Directors of the Departments of Fish and Game, Parks and Recreation, and Public Works, the Deputy Director for Policy of the Department of Water Resources, and the Planning Officer of the State Office of Planning, have affixed their signatures to the report; and

WHEREAS, The report recommends that the Departments of Water Resources, Parks and Recreation, Fish and Game, and the Bureau of Reclamation carefully evaluate the 26 listed water-based recreation potentials for recreation reservoirs, aquatic parks and wildlife areas for ultimate development of those found to be needed and feasible, giving emphasis to the Lost Hills-Tupman-Buena Vista area, the Kettleman City area, the Cottonwood-Poverty Flat area, and angling access to the aqueduct; and

WHEREAS, Such evaluation and development is primarily the responsibility of the Department of Water Resources under the provisions of the Davis-Dolwig Act; and

WHEREAS, Full development of the recreation and fish and wildlife potentials of the California Aqueduct and associated facilities is in the public interest; now, therefore, be it

Resolved by the Senate of the State of California, That the Department of Water Resources is directed, in co-operation with the Department of Fish and Game, the Department of Parks and Recreation, and the United States Bureau of Reclamation, to carefully evaluate the 26 water-based recreation potentials included in the report "California's West Side Program," giving emphasis to the Lost Hills-Tupman-Buena Vista area, the Kettleman City area, the Cottonwood-Poverty Flat area, and angling access to the aqueduct; and be it further

Resolved, That the Department of Water Resources shall report on the desirability, and the engineering and economic feasibility of the 26 water-based potentials, including any it may wish to suggest in addition or as an alternate to the 26 listed, to the Legislature before the fifth legislative day of the 1965 Regular Session; and be it further

Resolved, That the Secretary of the Senate be directed to present copies of this resolution to the Director of the Department of Water Resources, the Director of the Department of Fish and Game, the Director of the Department of Parks and Recreation, and the Administrator of the Resources Agency.

Adopted May 22, 1963

Appendix C

Review Comments by Other Agencies

C O P Y

Department of
PARKS AND RECREATION
San Joaquin County

222 East Weber Avenue
Stockton, California 95202

December 17, 1964

Reginald C. Price, Acting Director
State of California Department of Water Resources
P. O. Box 338
Sacramento, California

Dear Mr. Price:

Your letter of December 7 addressed to the San Joaquin County Board of Supervisors and the accompanying preliminary report on "Evaluation of Potential Recreation Along the California Aqueduct" which the County received on December 10 was referred to this department on December 16 for comment and answer.

We have not studied the Department of Water Resources Bulletin No. 127 and consequently are not able to comment on the final recommendations on page 32 of the preliminary report.

The other recommendations outline a procedure which seems to be entirely reasonable and feasible. Acquisition of all sites in the near future with early development of the more southerly ones offer an opportunity to provide facilities for water recreation in areas of great shortage. Development of remaining sites as the need for them develops offers an opportunity to construct facilities to meet current specific needs in the delayed development areas.

A canalside wildlife habitat developed in conformity with the operation and maintenance needs of the aqueduct can be a valuable adjunct to wildlife of the area through which the canal passes.

Since there is only one site listed in the report which is located in San Joaquin County, I am enclosing a copy of a letter written to Carl Stetson, Chief of your San Joaquin Valley Branch in response to his request on November 16 for comments on "Recreation Land-Use and Acquisition Plan North San Joaquin Division, California Aqueduct".

Sincerely,

/s/ Wayne Bartholomew, Director
Parks and Recreation Department

sat
Encl.
cc: Mr. Kenyon
Board of Supervisors
Parks and Recreation Committee

C O P Y

December 2, 1964

Carl L. Stetson, Chief
San Joaquin Valley Branch
Department of Water Resources
P. O. Box 2385
Fresno, California 93821

Dear Mr. Stetson:

Your letter of November 16, 1964, to the Board of Supervisors of San Joaquin County and attached to the draft report "Recreation Land-Use and Acquisition Plan, North San Joaquin Division, California Aqueduct" was referred to this department. The letter invited comments by San Joaquin County and requested that these comments reach your office by December 8, 1964.

The final report probably should contain a statement or series of statements clearly outlining the responsibilities of local and state governments in the development and in the maintenance and operation of the proposed recreation sites.

Some terms used in the plan are not clearly understood even by professional planners and recreation personnel. For instance, "fishing promenade", mentioned several times in the report is not familiar to many.

When the plan for the Corral Hollow Road Fishing Access was discussed with San Joaquin County planners, a potentially hazardous condition was pointed out by our planners. This was the complete lack of any restraining railing or fence at the waters edge. Since many of the anglers using these facilities will be accompanied by children such a Safety precaution is highly desirable; especially above a swift flowing canal with steep concrete sides.

Sincerely,

Wayne Bartholomew, Director
Parks and Recreation Department

sat
cc: Bill Toomey
Board of Supervisors, San Joaquin County
William E. Warne

State of California C O P Y

MEMORANDUM

To: Hon. William E. Warne, Director
Department of Water Resources
1416 - 9th Street
Sacramento, California

Date : December 16, 1964

File No.: 06.10-Var.

Subject : California Aqueduct

From: DEPARTMENT OF PUBLIC WORKS
Director's Office

As requested by memorandum dated December 7, 1964, the draft copy of the report entitled "Evaluation of Potential Recreation Areas Along the California Aqueduct" has been reviewed.

I have previously commented on the reports entitled "San Luis Reservoir and Forebay Recreation Development Plan", and "Recreation Land-Use and Acquisition Plan, North San Joaquin Division, California Aqueduct." My comments were transmitted by letters dated December 2 and December 4, 1964, respectively. I have nothing to add to these comments in regard to projects outlined in the present report for San Joaquin, Stanislaus and Merced Counties.

I have discussed the projects proposed south of Merced County with the State Highway Engineer, and wish to offer the following comments:

General - The Department of Public Works endorses the development of the recreation facilities found to be feasible.

Access - In general, access from the recreation sites to State highways raises no insoluble problems. However, as pointed out in specific cases below, it appears that there are unresolved questions in regard to such access, and that further coordination of this matter with the Division of Highways would be very desirable.

Route Numbers - State highway route numbers have recently been changed, and there are some superseded or incorrect route numbers in the report, as noted below.

Three Rocks Fishing Access Site - The State highway on Plate 9 should be designated as Route 33. Route 33 is being raised to cross the San Luis Canal, and will be on an 11-foot fill at the location proposed for access to the fishing site. This design consideration may affect access road planning.

Huron Fishing Access Site - At this location Route 198 is on the State Freeway and Expressway System. The ultimate development of this route will be a consideration in planning access to the fishing site. In our preliminary studies, we have considered expanding the right of way for Route 198 to the south about 180 feet.

Plate No. 8 shows a county road, Siskiyou Avenue, as crossing the San Luis Canal. We understand that the Bureau of Reclamation does not anticipate that this road will be carried across the canal.

Kettleman City Aquatic Park - Excellent access from Route 5 will be provided through the Utica Avenue interchange.

Plate No. 7 indicates a Route 41. Route 41 does not pass near this area. The road labeled "Existing State Highway" is a county road, 25th Avenue.

Lost Hills Fishing Access Site - Route 46 is on the State Freeway and Expressway System. Although access to the originally planned location of the site could be a problem, it appears that the alternate location recommended in the report will present no difficulties.

Buttonwillow Fishing Access Site - The State highway on Plate No. 5 should be designated as Route 58.

Wheeler Ridge Fishing Access Site - The State highway on Plate No. 2 should be designated as Route 166. The ultimate development of Route 166 as a feature of the State Freeway and Expressway System will be a consideration in planning access to the fishing site.

Large overland flows during heavy storms will be interrupted by the California Aqueduct, and may make drainage of the fishing site difficult.

Thank you for the opportunity to review and comment on this report.

/s/ JOHN ERRECA
Director of Public Works

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

REGIONAL OFFICE, REGION 2
P.O. BOX 2511
SACRAMENTO, CALIFORNIA 95811

December 17, 1964

Mr. William E. Warne, Director
Department of Water Resources
P. O. Box 388
Sacramento, California

Dear Mr. Warne:

Thank you for the opportunity to review your report draft "Evaluation of Potential Recreation Areas Along the California Aqueduct," which was transmitted with Mr. Reginald C. Price's letter of December 7, 1964.

We were not able to obtain the review and comments of the National Park Service and the Bureau of Outdoor Recreation before your deadline date of December 14, 1964. However, if you could allow additional time, we will be pleased to ask the agencies for their comments.

Our general impression is that the aqueduct, because of its magnitude and the width of right-of-way required, will attract public use and that in fact some use should be made of the extensive land area involved. From the information given on the maps in the report, we are unable to presently determine whether the indicated areas required for Ora Loma, Three Rocks, and Huron fishing access sites have been acquired by the Bureau of Reclamation. We are not acquiring any lands on the San Luis Canal for recreation. However, we have acquired some lands in these general vicinities which might be made available later to the State of California after they have served their present purpose for construction. We are, however, in agreement that the canal or aqueduct is likely to be good fish habitat and that, undoubtedly, provision for public angling access will be necessary. Acquisition of these sites will need to be a part of the overall development program for the aqueduct.

As a part of a program for utilization of the lands along the canal, it seems desirable also to include plantings for wildlife habitat as contemplated by the Department of Fish and Game, which could be corollary to a weed control program. We have, in fact, given some consideration to recommending preparation of an overall management program for the lands bordering the San Luis Canal portion of the aqueduct, including riding and hiking trails, bicycle paths, rest stops, etc., as well as wildlife habitat and

angling access sites. Development could be somewhat similar to that contemplated along the American River by Sacramento County. You may want to consider expanding your study to include this concept for the entire aqueduct.

Should the concept of a management plan, as visualized above, be found practicable, we believe that the work would be suitable for performance by the Job Corps, at least where the land is in Federal ownership, and perhaps on State lands as well. You may want to mention this possibility in connection with discussion on financing.

Sincerely yours,

/s/ R. J. Pafford, Jr.
Regional Director

COPY

f California

The Resources Agency of California

RANDUM

Date: December 14, 1964

Honorable William E. Warne, Director
Department of Water Resources
Resources Building, 11th Floor

: Department of Parks and Recreation

Subject: Review of Draft Copy of Report "Evaluation of Potential Recreation Areas Along the California Aqueduct"

Thank you for the opportunity to review the subject report. In general we support the findings and recommendations as presented. There are some portions of the report, however, where we believe modifications are desirable. These are as follows:

1. Choice of Initial Fishing Access Sites. Parks and Recreation, through its contract services personnel has recommended that the initially developed fishing access sites be located at Corral Hollow, Three Rocks and Lost Hills. The report recommends Sperry Road, Three Rocks and Wheeler Ridge fishing access sites for initial development. We concede that Wheeler Ridge is a reasonable substitute for the Lost Hills site but do suggest that you give consideration to replacing the Sperry Road site with the Corral Hollow site.

2. Cost of Recreation Development. It is the opinion of the Department of Parks and Recreation that all mention of estimated cost of development of the areas where recreation developments are proposed should be eliminated from the report. This includes Tables 2, 3, 4, 5, 6 and 7 and all textual references to costs.

   Since all cost figures presented are only first estimates and will almost surely be revised during the preparation of the recreation development plans, it seems inadvisable to submit these first estimates to members of the Legislature and the general public. There is a real danger that cost estimates presented now, in writing, will be considered by the reader to be more than preliminary and to a degree, binding. I am sure that neither the Department of Water Resources nor the Department of Parks and Recreation wishes to be bound by these preliminary estimates.

   Further, benefits have not been discussed in the presentation. If it is absolutely necessary to have some indication of cost, a benefit-cost ratio for each area or unit involved might be a means of conveying to the reader that benefits will exceed costs but will not commit the State in any way with respect to costs.

3. Staging of Development of Ingram Creek Aquatic Park. Recently, the due date for completion of the Ingram Creek Aquatic Park Recreation Development Plan was postponed. It is doubtful if the plan will be completed in time to permit the normal budgetary process to provide funds for the development of facilities at Ingram Creek by 1968. Further, it should be understood that Ingram Creek will have a lower priority than most State Water Project features in competing for capital outlay funds. This is due to the fact that it would provide for a much more localized use than many of the other areas.

   It is recommended that you delete 1968 as the date for completion of initial recreation facilities at Ingram Creek and report instead that facilities will be installed as need and the availability of capital outlay funds dictate.

4. Title Page - Appendix C. No title page has been provided for Appendix C.

In transmitting the above comments to you I wish to again emphasize our general position that:

1. The Wildlife Conservation Board develop and arrange for operation of fishing access sites along the California Aqueduct; and

2. That we budget for recreational development at aquatic recreation areas which are not considered statewide in importance only after a local agency is committed to operation of the area.

/s/ CHARLES A. DeTURK
Director

Attch.

C O P Y

Stanislaus County

DEPARTMENT OF PUBLIC WORKS

1716 Morgan Road Post Office Box 3183 Phone LAmbert 4-1251, Ext. 62
Modesto, California
95353

December 28, 1964

Mr. Carl L. Stetson, Chief
San Joaquin Valley Branch
Department of Water Resources
P. O. Box 2385
Fresno, California

Subject: Recreation--California Aqueduct

Dear Mr. Stetson:

Reference is made to your letter of November 16, 1964, forwarding a draft copy of the report entitled "Recreation Land-Use and Acquisition Plan, North San Joaquin Division, California Aqueduct". We were unable to meet your deadline of December 8 for comments due to our comparing this with other reports and plans prepared for the same general area. However, earlier this month we contacted Mr. Richard W. Meffley of your office and gave our verbal approval to the report.

One suggestion which you may wish to consider at the Ingram Creek Aquatic Park is the inclusion of an island within the recreation pool. This would provide some variety and an opportunity for boaters to beach on a parcel of land "away from it all".

The State Parks Department is currently developing plans for the improvement of a Wayside Park in Orestimba Creek. This facility is approximately 52 acres in size but does not include the area with the Sycamore trees along the creek. It is unfortunate that the recreation planning did not include a larger area of park land at this location, for of the many miles of barren type country along the aqueduct, this indeed is an oasis. Similarly the Poverty Flat Aquatic Park and Wildlife Area certainly deserve consideration in the ultimate development of park sites.

It is our understanding that you have relocated the Fishing Access Site at the aqueduct in the vicinity of Sperry Road from the east side of the canal to the west side. We concur in this relocation because it disrupts to a lesser degree the remaining farm lands in the area.

Concurrently we have reviewed the Department of Water Resources bulletin relative to Evaluation of Potential Recreation Areas Along the California Aqueduct and generally agree with the comments made in this report.

Very truly yours

/s/ Richard G. Barhite

RICHARD G. BARHITE, Director
Department of Public Works

RGB:mz

cc: William Warne, Sacramento

COPY

State of California — Department of Public Health

MEMORANDUM

To: William E. Warne, Director
Department of Water Resources
1120 N Street
Sacramento, California

From: Malcolm H. Merrill, M.D.
Director of Public Health

Date: December 15, 1964

Subject: Draft Report, "Recreation Land-Use and Acquisition Plan, North San Joaquin Division, California Aqueduct"

We have reviewed this report as requested in your memo of November 23, 1964. Our comments follow.

1. Drinking Water

The quality of the water in the aqueduct requires that it receive complete treatment if it is to be used for drinking. By "complete treatment" we mean coagulation, sedimentation, filtration and disinfection.

Since this will prove costly, transporting a safe water to storage and distribution facilities may be the method of choice in the initial stages of development. Redisinfection at point of final storage will be necessary.

2. Sanitary Facilities

Pit privies, as proposed at the fishing access areas, will be troublesome. Chemical construction-type toilets, furnished and serviced under contract, are more satisfactory.

No details were included on facilities at the aquatic park. Since change rooms will be needed, water-flush fixtures are recommended. Treatment of the resulting sewage will be needed, preferably with subsurface disposal if soil properties permit. Disposal area should be located so that drainage will not reach the lake.

Disposal of sink wastes from the concession will be needed.

3. Solid Wastes

Garbage and trash receptacles, and collection and disposal arrangements will be needed for each picnic area. Disposal within the recreation area boundaries will not be feasible.

4. Water-Contact Sports

Few details were included on the construction and operation of the pond. A relatively shallow, mud bottom, long-shoreline body of water such as proposed will support heavy algae growths. This will reduce

underwater visibility and cause hazardous swimming conditions. Provisions should be made for flow-through and/or chemical treatment adequate to control algae growth.

Thank you for the privilege of reviewing this report.

/s/ Malcolm H. Merrill

Malcolm H. Merrill, M.D.
Director of Public Health

THE FRESNO COUNTY OFFICE OF ADMINISTRATIVE MANAGEMENT

Philip V. Sanchez
County Administrative Officer

Room 300, Hall of Records
Fresno, California 93721

December 22, 1964

Mr. Reginald C. Price, Acting Director
Department of Water Resources
P. O. Box 388
Sacramento, California

Dear Mr. Price:

Your December 7, 1964 letter and draft report entitled, "Evaluation of Potential Recreation Areas Along the California Aqueduct", which was submitted to the Fresno County Board of Supervisors for comment, has been referred to our office. We have asked various County officials concerned with recreation, planning and conservation to review the plan and make comments. When our review is complete we will forward the result to you.

Thank you for the opportunity to study your preliminary report. We commend the State in having the foresight to recognize the recreation potential of this vast water project and plan for its development.

Very truly yours,

/s/ Phillip V. Sanchez

PHILLIP V. SANCHEZ
County Administrative Officer

PVS:W:mb

C O P Y

State of California — The Resources Agency of California

MEMORANDUM

To: Honorable William E. Warne
Director
Department of Water Resources

From: Office of the Administrator

Date: December 17, 1964

Subject: Draft Copy of Office Report "Evaluation of Potential Recreation Areas Along the California Aqueduct"

Reference is made to your memorandum of December 7, 1964, signed by Mr. Reginald Price, Acting Director, transmitting the subject report for review and comment.

It appears to me to be a reasonable analysis of the 26 water based recreation potentials outlined in "California's Westside Program". The question of costs and budgeting of funds will, of course, have to be dealt with in successive years as these items come forward.

/S/ Fred
Fred L. Jones
Assistant to Administrator

State of California — The Resources Agency

Memorandum

To : Honorable William E. Warne
Director
Department of Water Resources
Room 1123, 1416 Ninth Street
Sacramento, California

Date: December 31, 1964

From : Department of Fish and Game

Subject: WP - State of California, California Aqueduct Draft Report, "Evaluation of Potential Recreational Areas Along the California Aqueduct - January 1965"

Subject preliminary report of January 1965 by the Department of Water Resources has been reviewed as requested in your memorandum of December 7, 1964.

We concur in the report except that in some areas it appears that the comments made in the Department of Fish and Game's memorandum of October 23, 1964 were perhaps not considered sufficiently. We therefore wish to call your attention to some of these and to a few other points which may improve the report.

Chapter I

Page 3, line 5 - We suggest changing "waterfowl management area" to "wildlife area."

Page 3, Summary - We suggest the first sentence be changed to read: "Based on investigation and review of the proposed projects this report presents an evaluation of 26 water-based potential recreation and fish and wildlife areas."

Page 4, item 6 - Lost Hills Reservoir and Wildlife Area

We believe greater consideration should have been given to the wildlife and fisheries enhancement possibilities associated with this site as reported in Fish and Game's memorandum of October 23, 1964. Maintenance of the Pacific Flyway and preservation of wildlife habitat should also be a part of the criteria for evaluation of this area. We question the need of initial purchase of 20,000 acres.

Page 5, item 18 - Cottonwood Aquatic Park and Wildlife Area

The conclusion does not appear to consider the many fish and wildlife enhancement benefits as described in the Department of Fish and Game's memorandum of October 23, 1964.

Page 5, item 20 - Poverty Flat Aquatic Park

Same comment as for page 5, item 18.

Chapter II

Page 15, line 1 - Change waterfowl management area to wildlife area.

Page 15 - 16, item 6 - Lost Hills Reservoir and Wildlife Area

Same comments as for page 4, item 6.

Page 20, item 18 - Cottonwood Aquatic Park and Wildlife Area

Same comments as for page 5, item 18.

Page 21, item 20 - Same comments as for page 5, item 20.

Chapter III

Page 23, item 24 - Canal Side Wildlife Habitat Development

We suggest changing the second paragraph to read: "Development of canal side wildlife habitat should begin as soon as the aqueduct is constructed and in any event before native grasses and other plants become established. No land need be acquired specifically for this purpose. Planting of available areas within the aqueduct right of way and on severence parcels should be done in conformance with the Department of Water Resources requirements for operation and maintenance of the aqueduct."

Page 23, item 25 - Angling Aqueduct Access Sites

Reference should be made to wildlife enhancement possibilities that appeared in the Department of Fish and Game's memorandum of October 23, 1964

Page 25, item 26 - Drainage Project Wildlife Areas

We suggest the first paragraph be changed to read: "The San Joaquin Master Drain has the potential for providing excellent opportunities to develop wildlife and recreation areas. The Department of Water Resources intends to design and operate the project so as to preserve existing fish and wildlife resources and where possible and feasible to provide for enhancement of these resources.

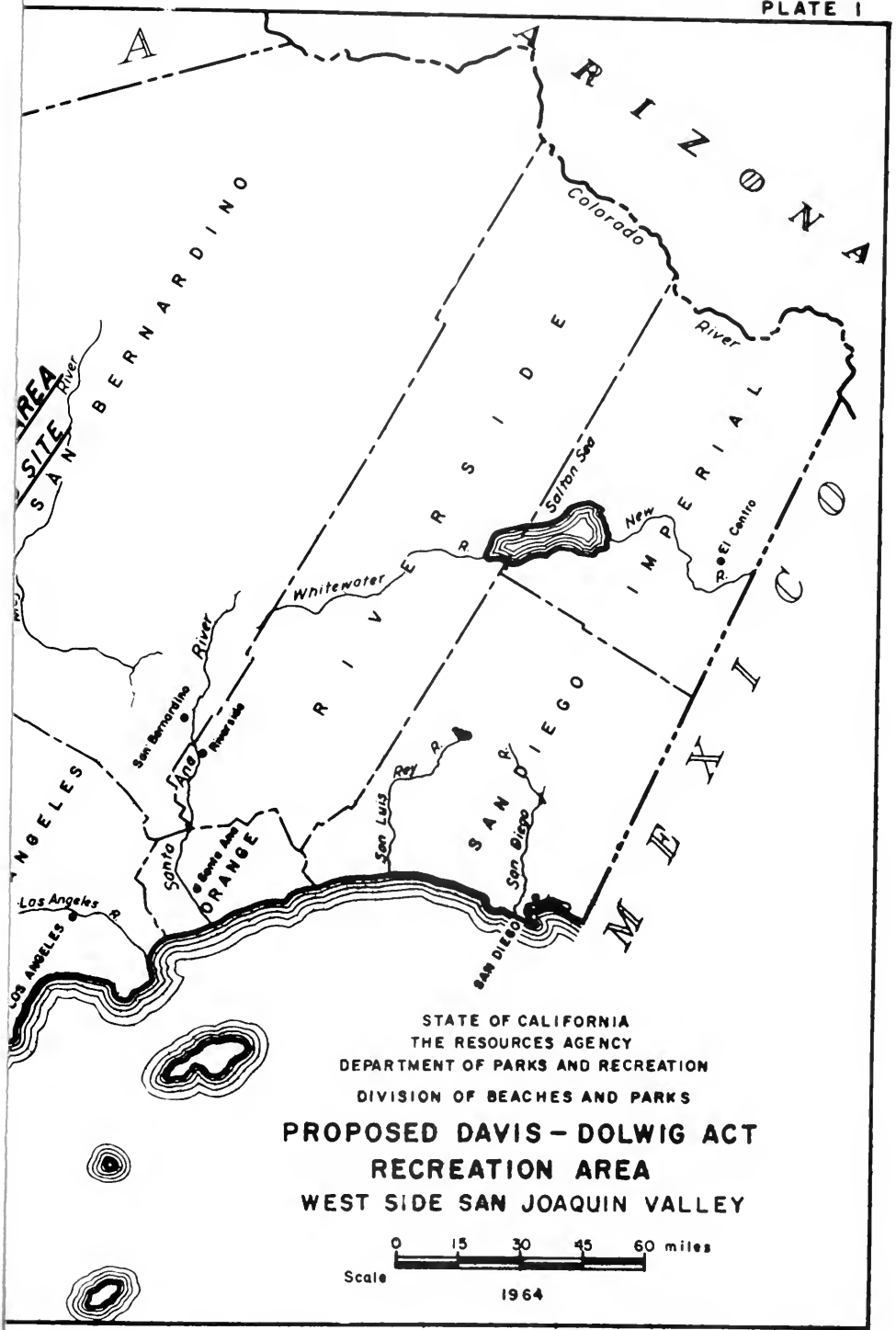
Director

cc: San Joaquin Branch, Department of Water Resources

Appendix D

Plates From the Report "Recreation Evaluation of the Twenty-six Sites in 'California's West Side Program'" by the Department of Parks and Recreation

PLATE 1



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION
DIVISION OF BEACHES AND PARKS

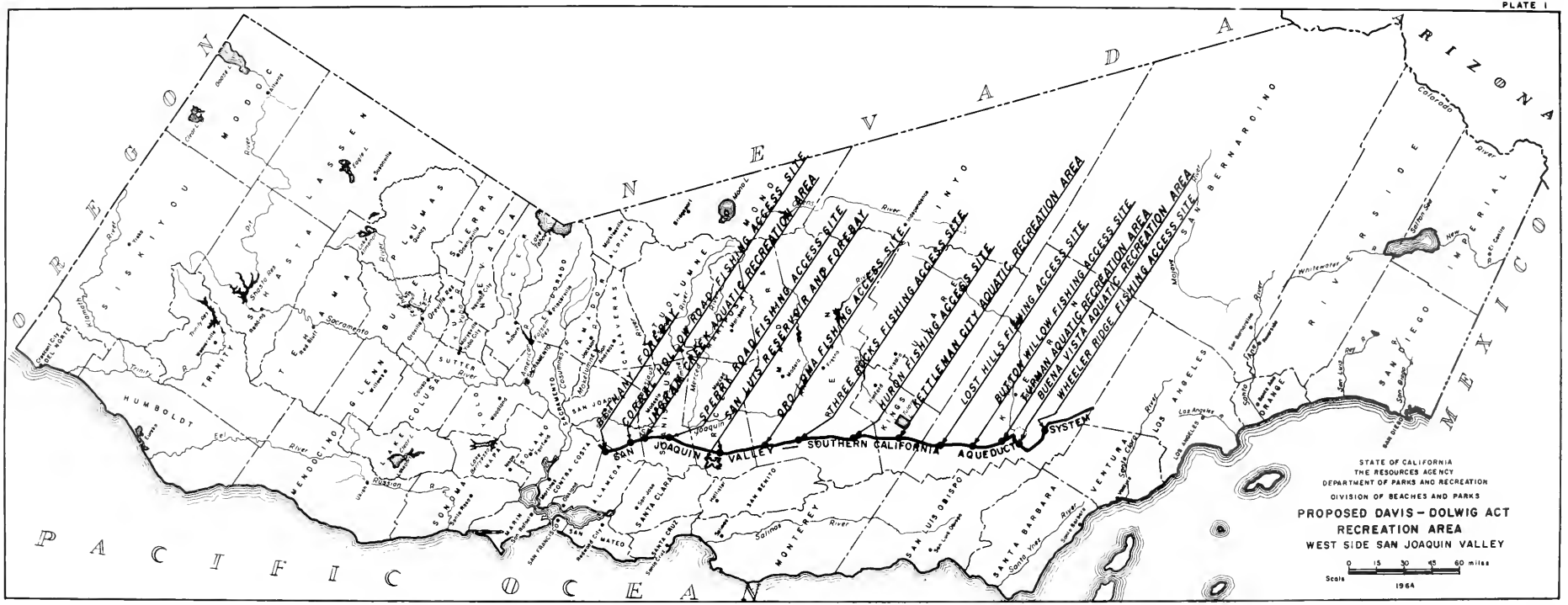
PROPOSED DAVIS – DOLWIG ACT RECREATION AREA

WEST SIDE SAN JOAQUIN VALLEY

Scale 0 15 30 45 60 miles

1964

PLATE I



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION
DIVISION OF BEACHES AND PARKS

PROPOSED DAVIS – DOLWIG ACT RECREATION AREA

WEST SIDE SAN JOAQUIN VALLEY

0 15 30 45 60 miles
Scale

1964

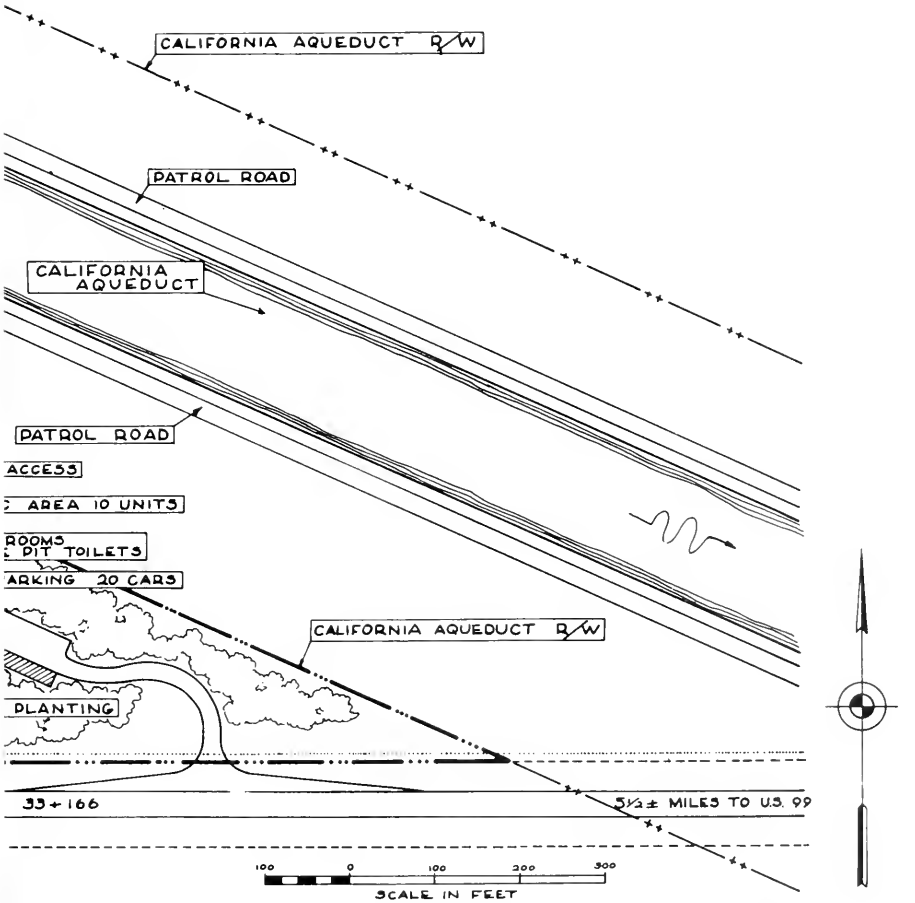


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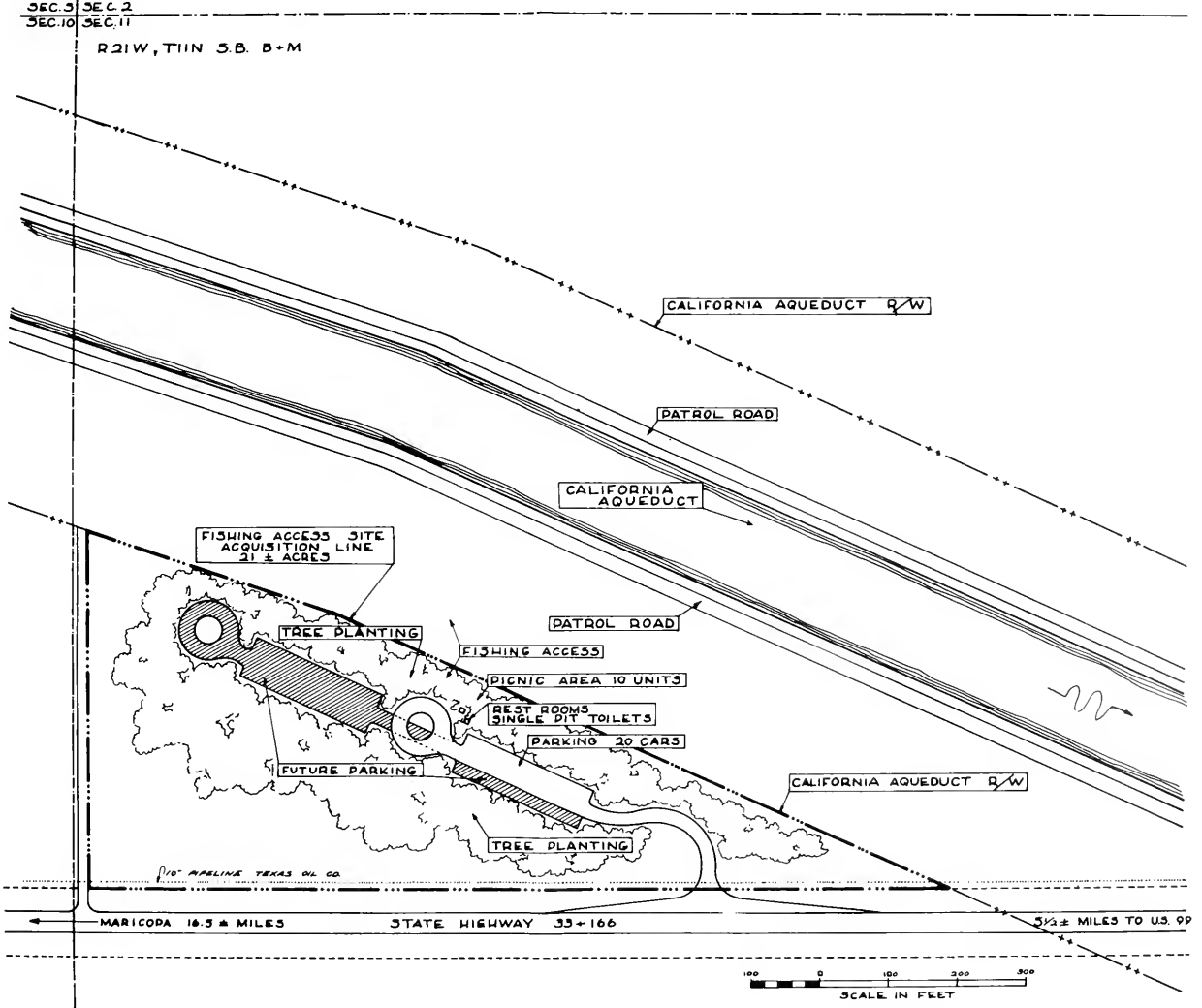
PLATE 2



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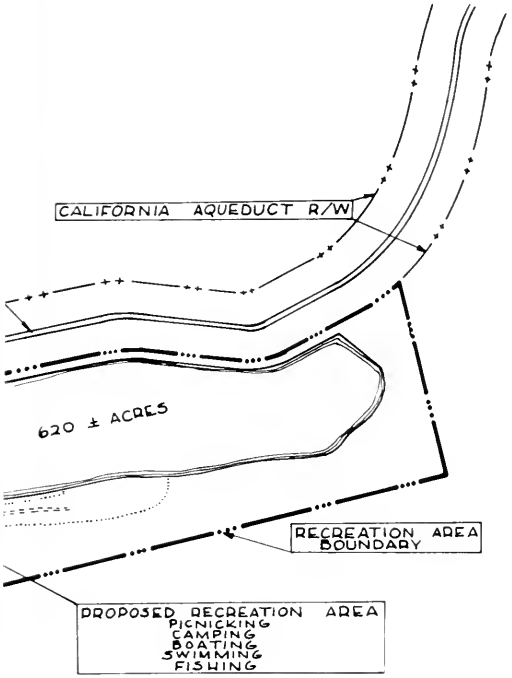

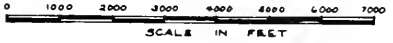

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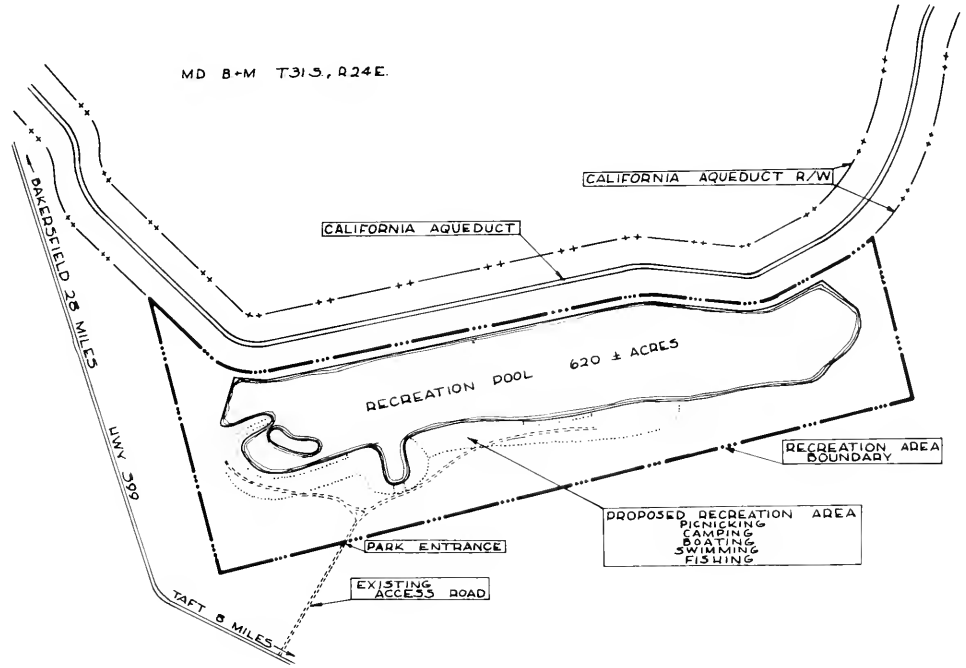

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THE RESOURCES AGENCY OF CALIFORNIA

DIVISION OF BEACHES AND PARKS

DEPARTMENT OF PARKS AND RECREATION

APPROVED _____ DATE _____

DEPUTY CHIEF DIVISION OF BEACHES AND PARKS

BUENA VISTA AQUATIC RECREATION AREA STUDY PROPOSED LAND USE

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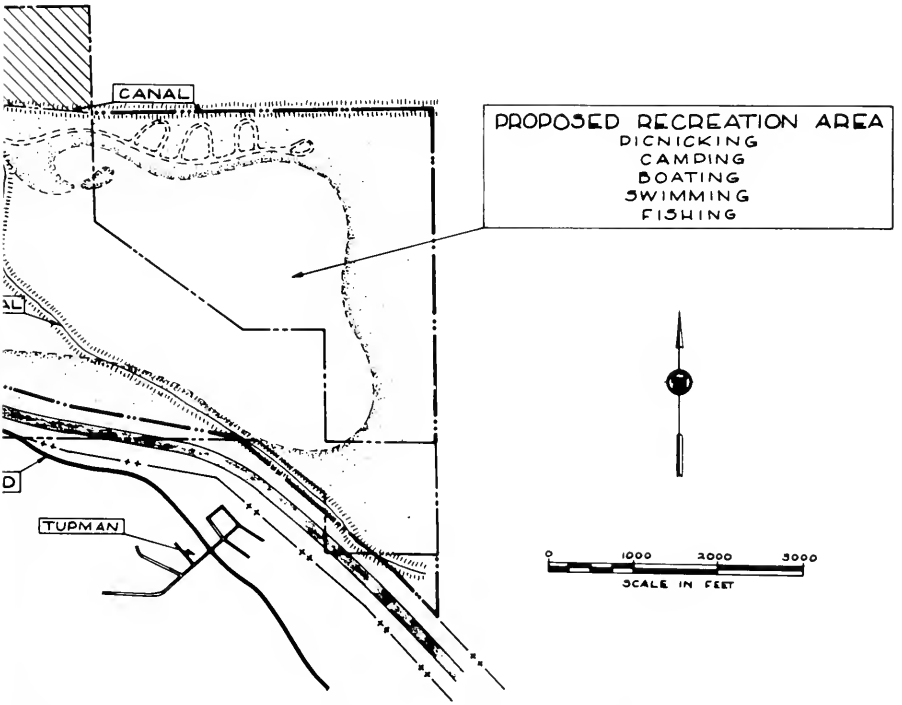

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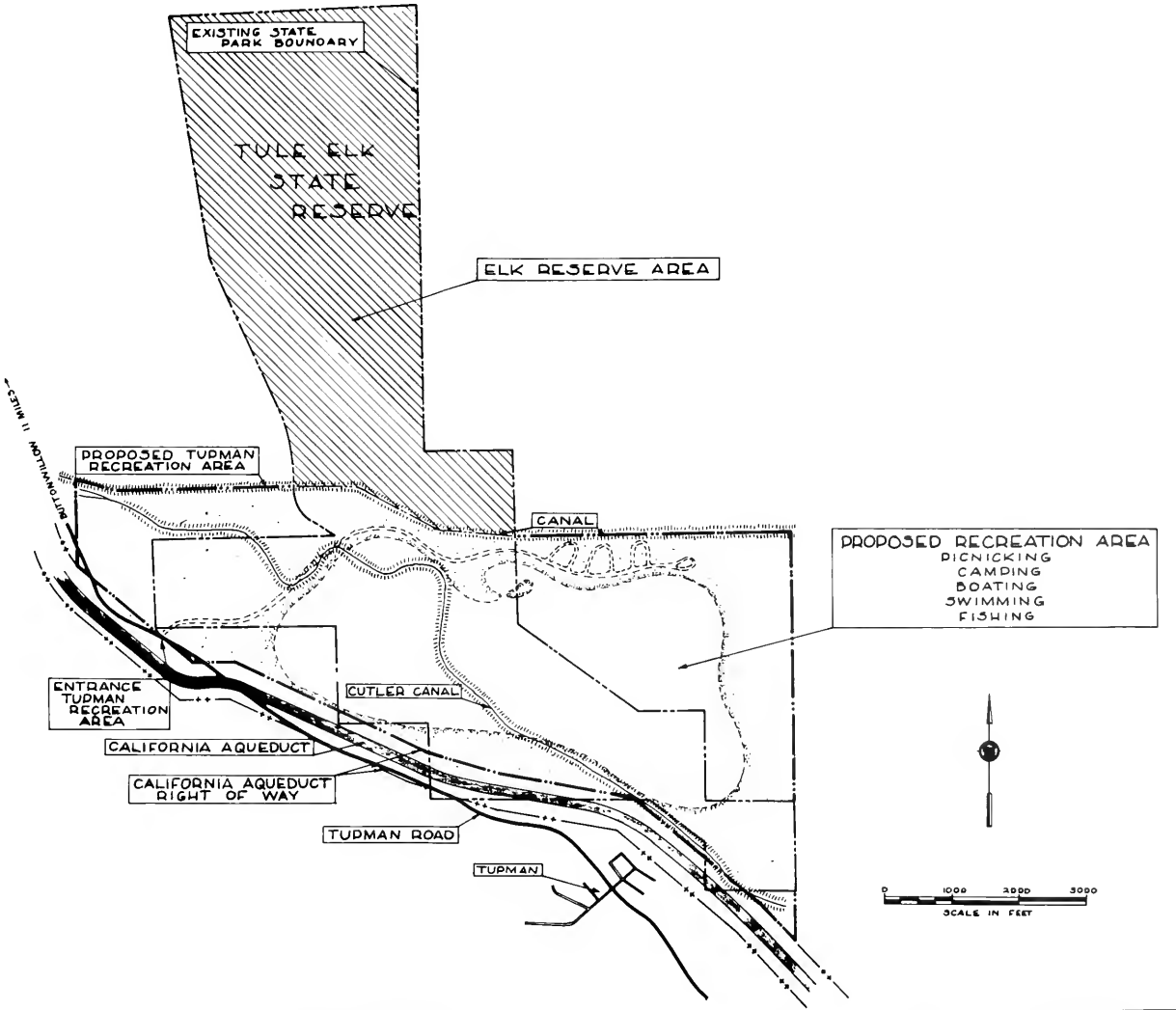

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CHECKED BY H.W.L & M.E.	CHECKED BY	REVIEWED BY
DATE 3-9-66	DATE	DATE

RECOMMENDED

_____ DATE
_____ DATE
_____ DATE

THE RESOURCES AGENCY OF CALIFORNIA

DIVISION OF BEACHES AND PARKS

DEPARTMENT OF PARKS AND RECREATION

APPROVED _____ DATE _____
DEPUTY CHIEF DIVISION OF BEACHES AND PARKS

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PROPOSED LAND USE

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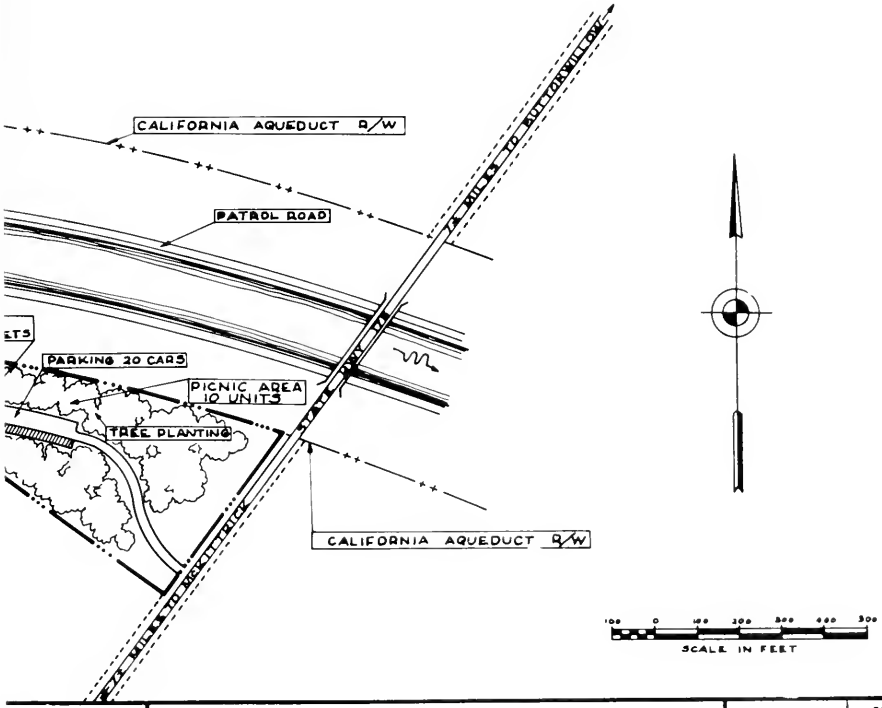

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RECREATION SITE STUDY
BUTTONWILLOW FISHING ACCESS SITE
DEVELOPED AREA PLAN

DRAWING NO.	SHEET
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DISTRICT	

PLATE 5

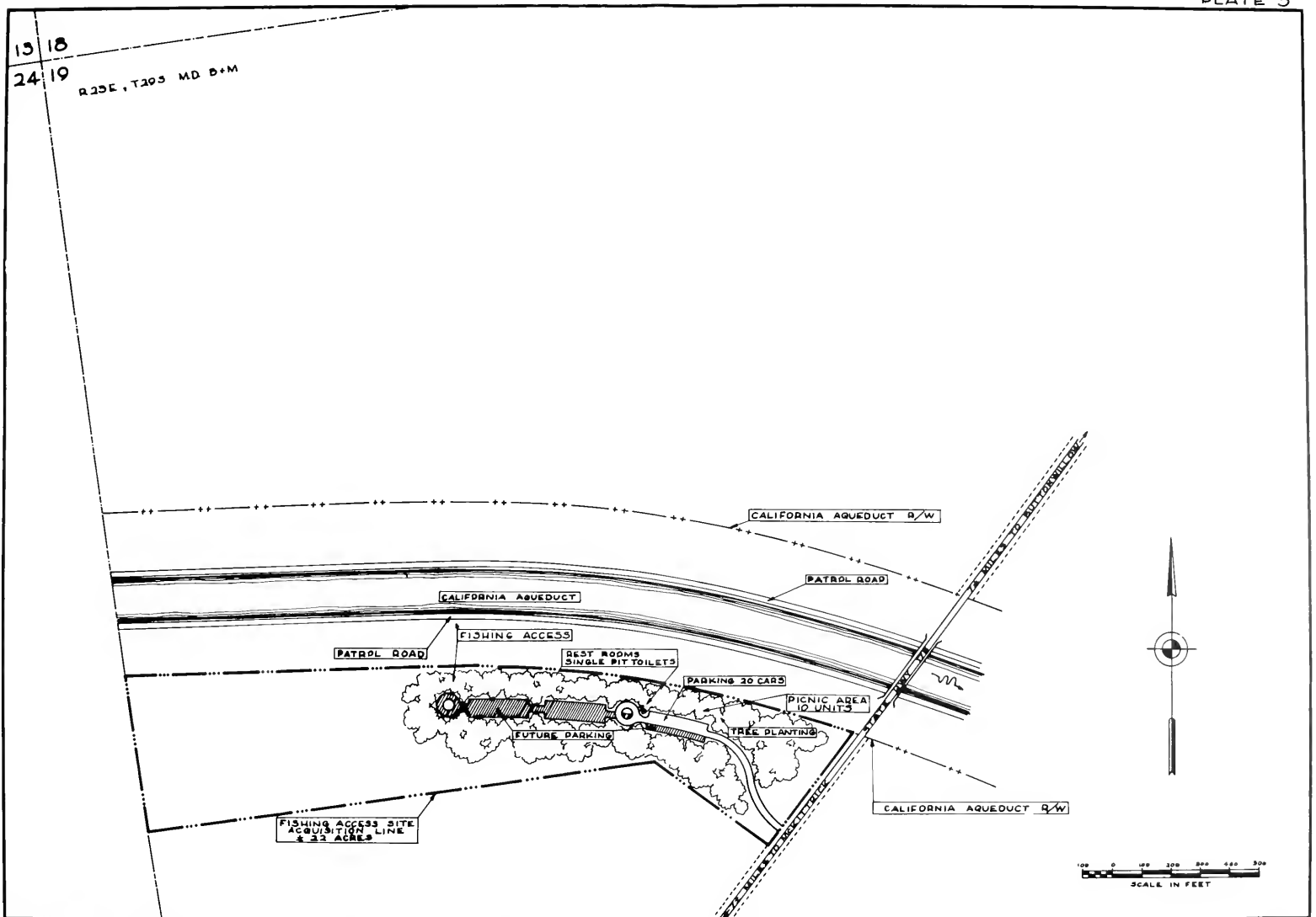

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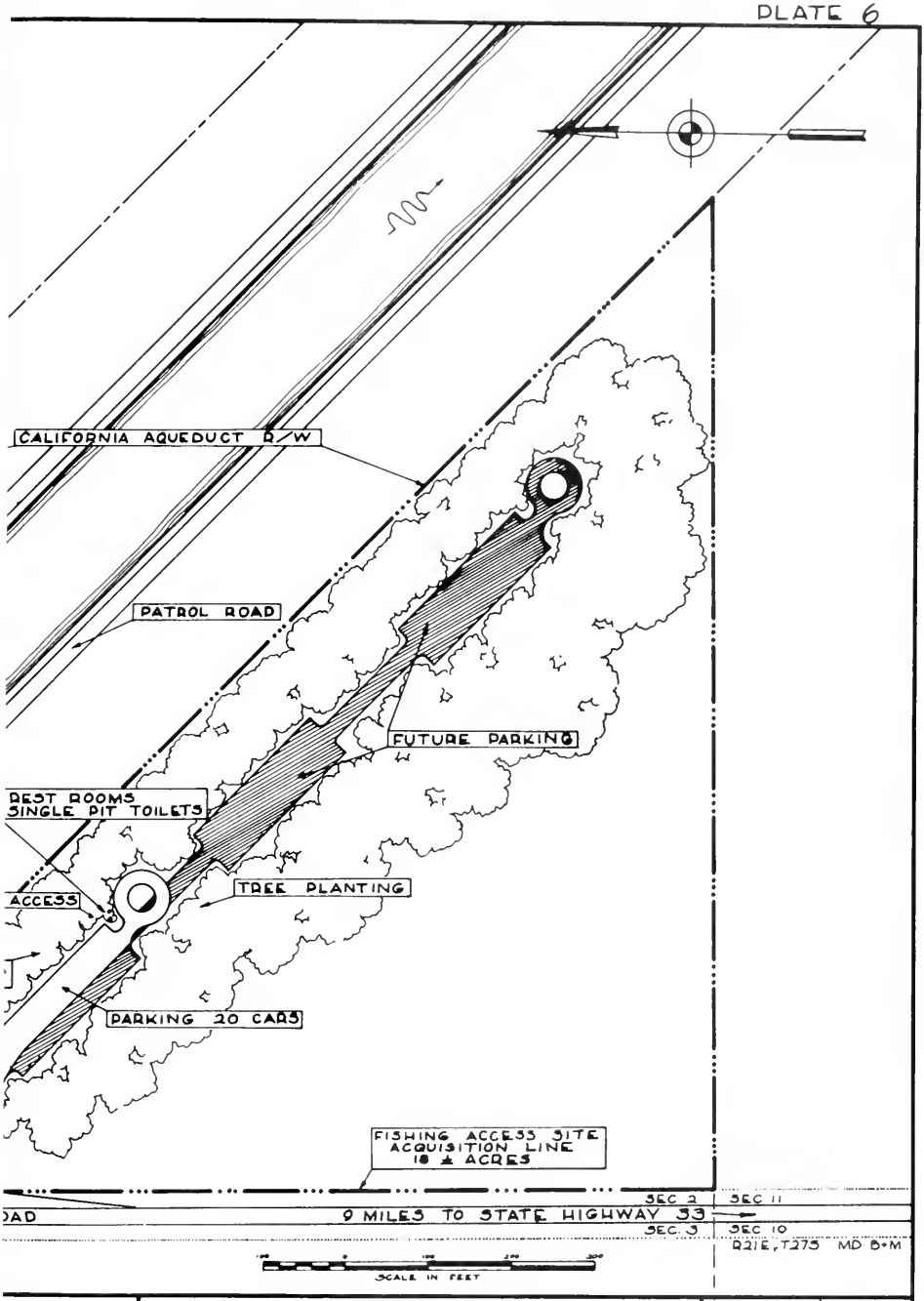
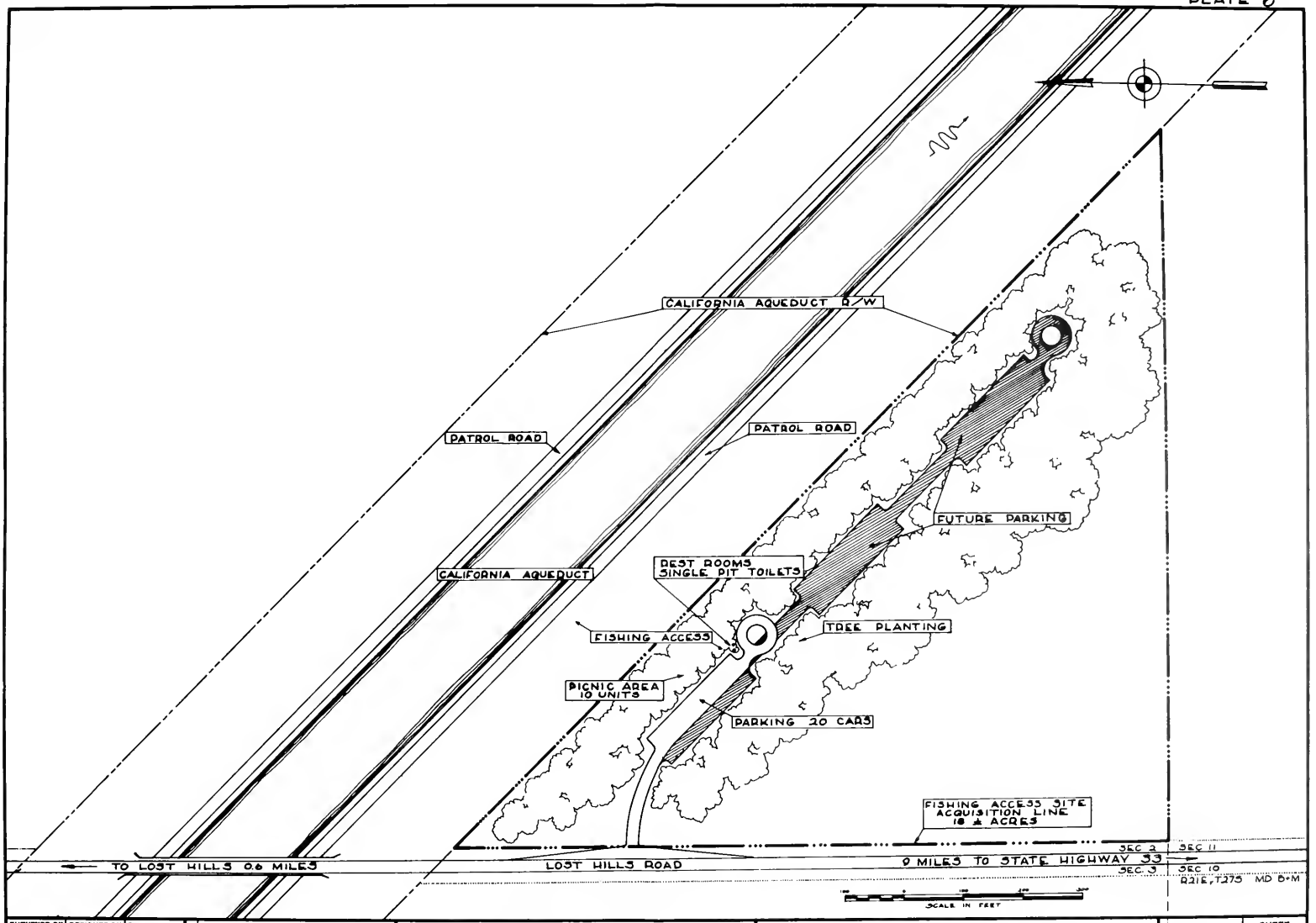
PLATE 6

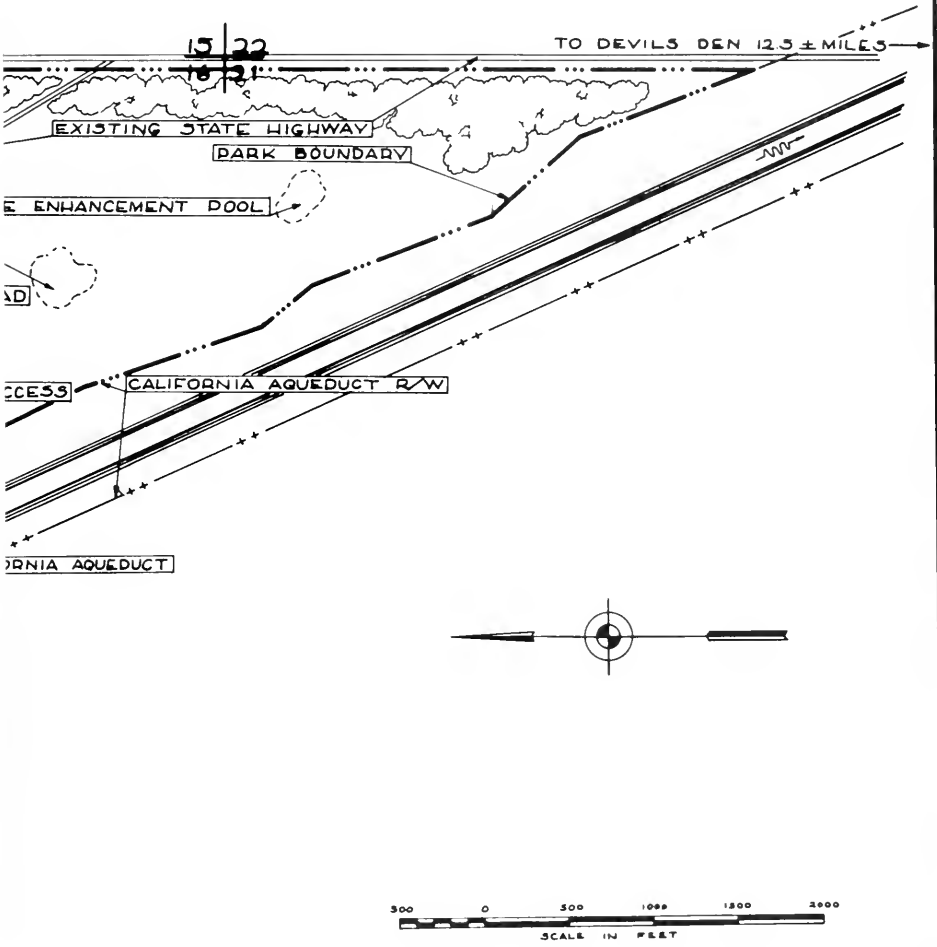


D PARKS DATE	RECREATION SITE STUDY LOST HILLS FISHING ACCESS SITE DEVELOPED AREA PLAN	DRAWING NO. FILE NO. DISTRICT	SHEET OF

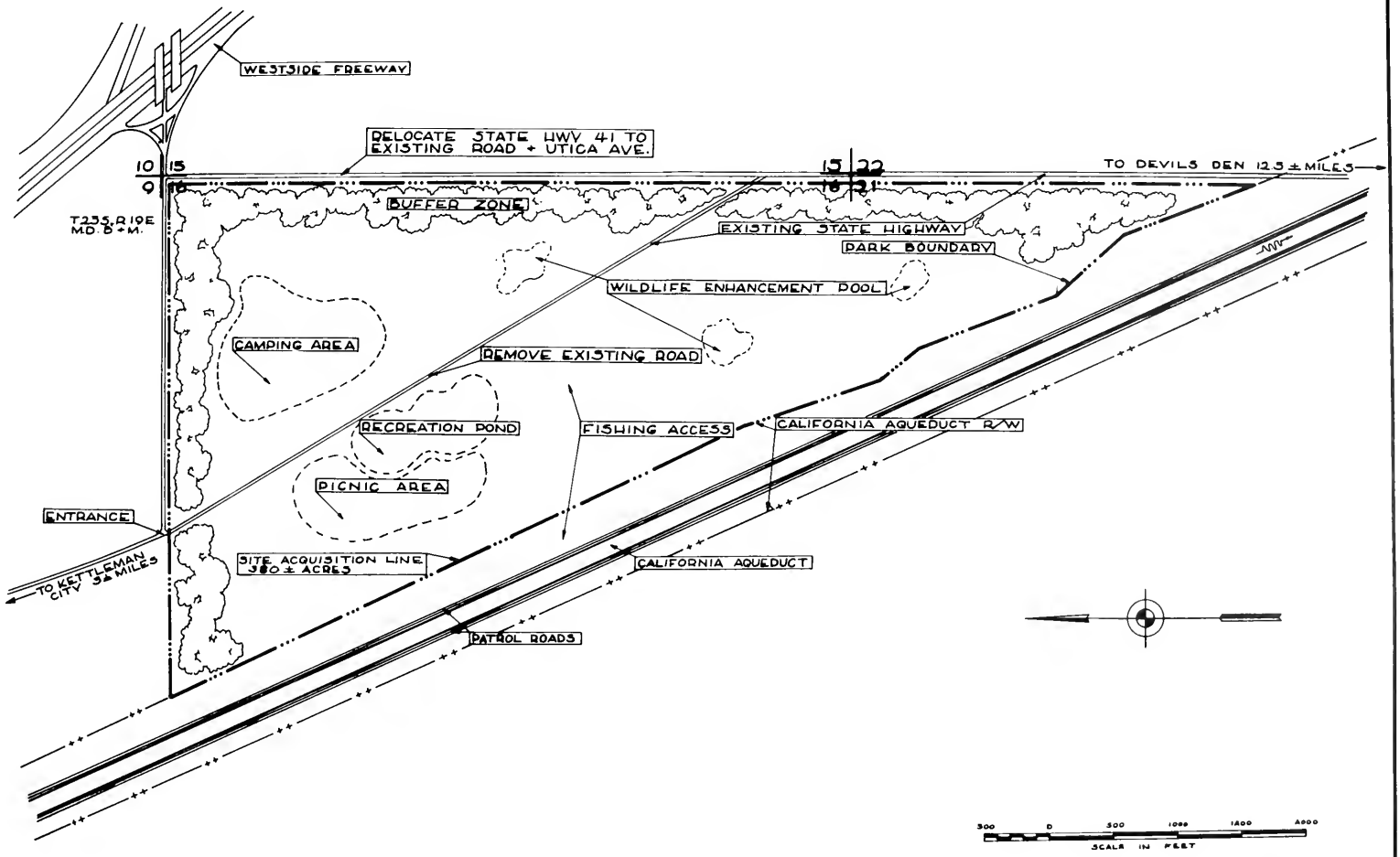
PLATE 6



SURVEYED BY	DESIGNED BY	REVIEWED BY	RECOMMENDED			
DATE	DATE	DATE		DATE	THE RESOURCES AGENCY OF CALIFORNIA **DIVISION OF BEACHES AND PARKS** DEPARTMENT OF PARKS AND RECREATION	RECREATION SITE STUDY LOST HILLS FISHING ACCESS SITE DEVELOPED AREA PLAN
TRACED BY	DRAWN BY	REVIEWED BY		DATE		DRAWING NO.
DATE	DATE 7-14-[illegible]	DATE		DATE		FILE NO.
CHECKED BY	CHECKED BY	REVIEWED BY		DATE	APPROVED DATE DEPUTY CHIEF, DIVISION OF BEACHES AND PARKS	DISTRICT
DATE	DATE 7/17/[illegible]	DATE				SHEET OF



NIA D PARKS ON DATE	RECREATION SITE STUDY KETTLEMAN CITY AQUATIC RECREATION AREA DEVELOPED AREA PLAN	DRAWING NO. FILE NO. DISTRICT	SHEET OF



SURVEYED BY	DESIGNED BY	REVIEWED BY
DATE	DATE	DATE
TRACED BY	DRAWN BY	REVIEWED BY
DATE	DATE 2-12-57	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE 7/17/57	DATE

DATE

DATE

DATE

THE RESOURCES AGENCY OF CALIFORNIA

DIVISION OF BEACHES AND PARKS

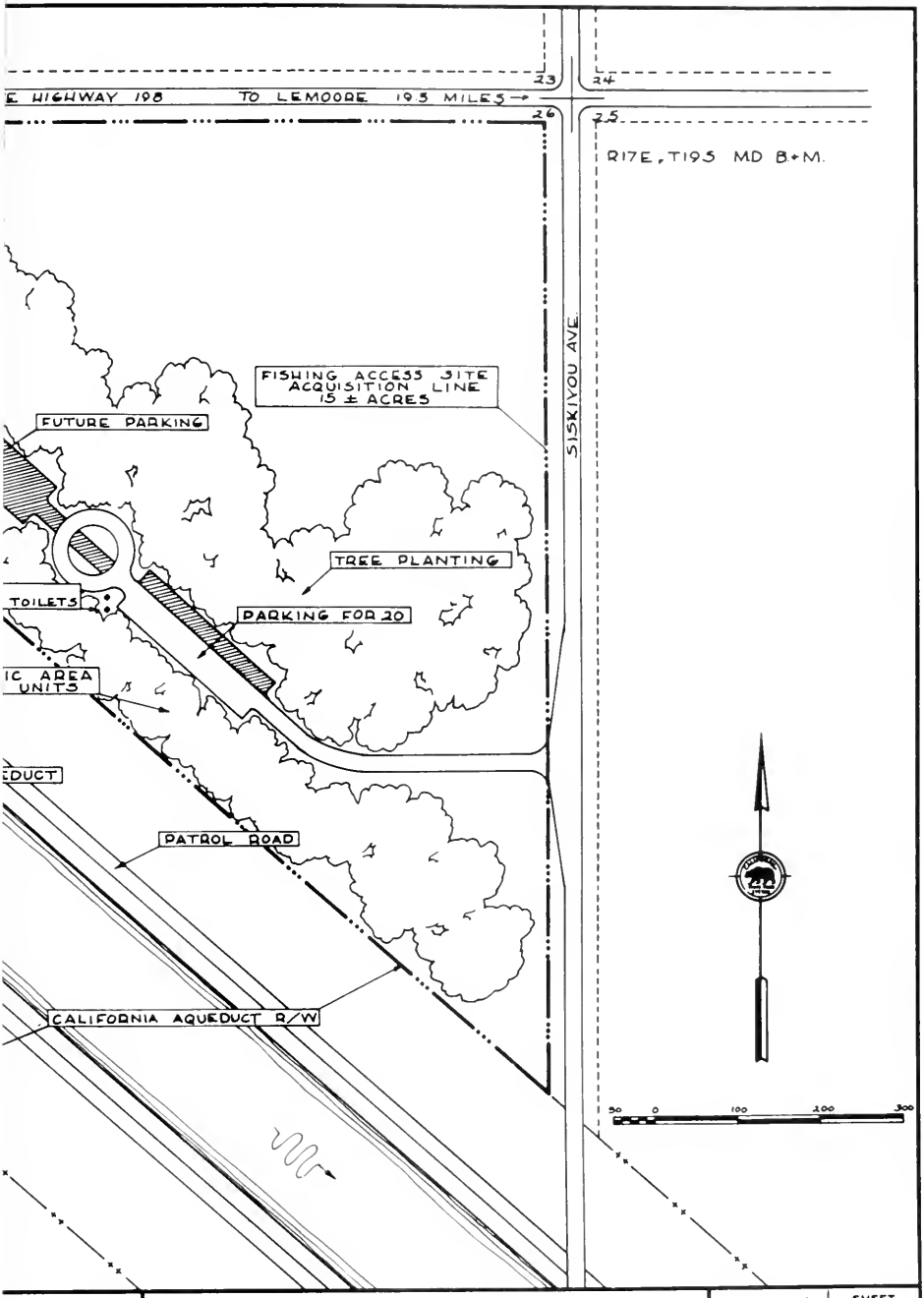
DEPARTMENT OF PARKS AND RECREATION

APPROVED_____ DATE_____

DEPUTY CHIEF, DIVISION OF BEACHES AND PARKS

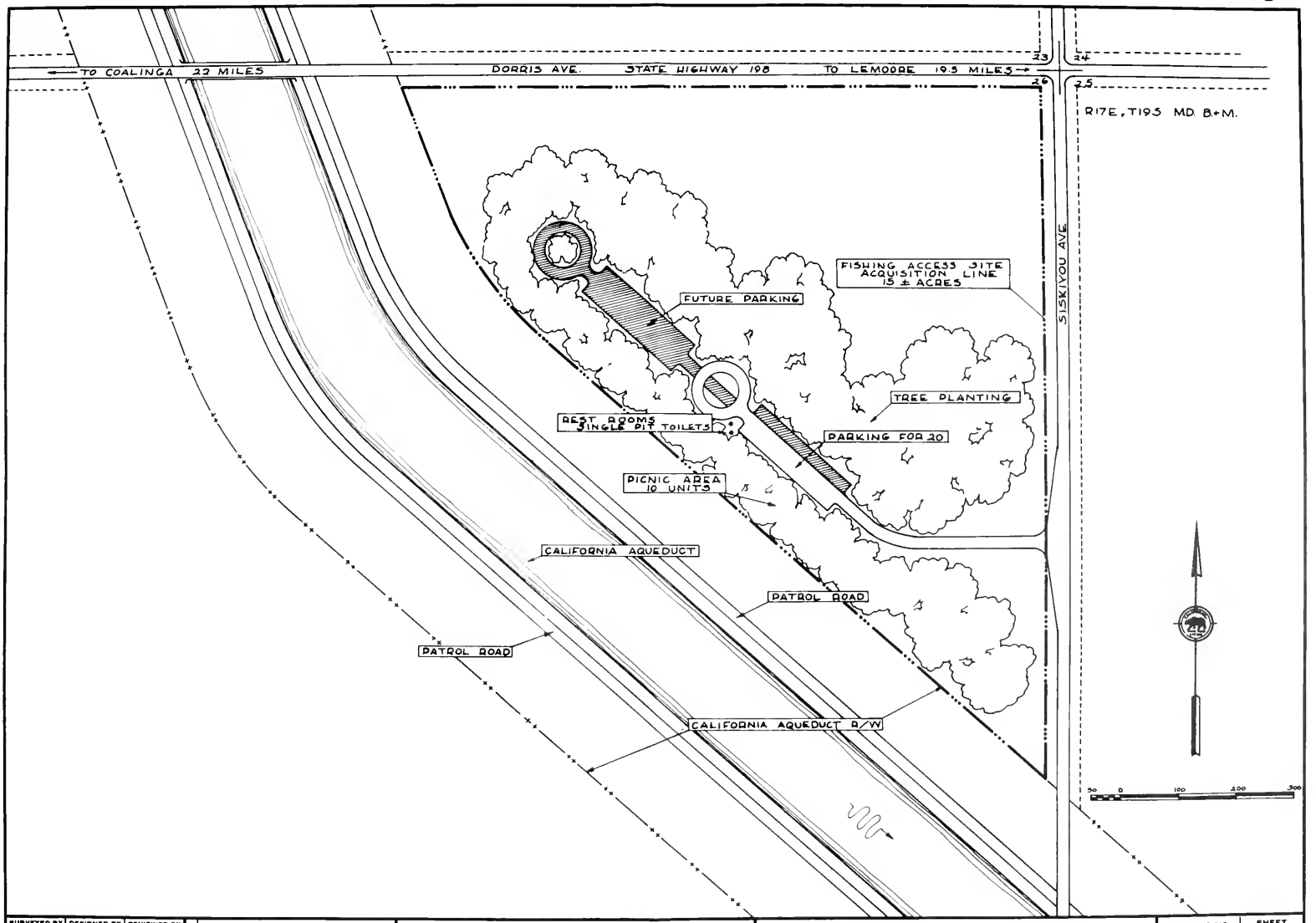
RECREATION SITE STUDY
KETTLEMAN CITY AQUATIC RECREATION AREA
DEVELOPED AREA PLAN

DRAWING NO.	SHEET
FILE NO.	OF
DISTRICT	



IIA D PARKS ON DATE	RECREATION SITE STUDY HURON FISHING ACCESS SITE DEVELOPED AREA PLAN	DRAWING NO.	SHEET
		FILE NO.	OF
		DISTRICT	

PLATE 8



SURVEYED BY	DESIGNED BY	REVIEWED BY
DATE	DATE	DATE
TRACED BY	DRAWN BY C. Dewey 8-4-64	REVIEWED BY
DATE	DATE	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE	DATE

RECOMMENDED

DATE

DATE

DATE

THE RESOURCES AGENCY OF CALIFORNIA

DIVISION OF BEACHES AND PARKS

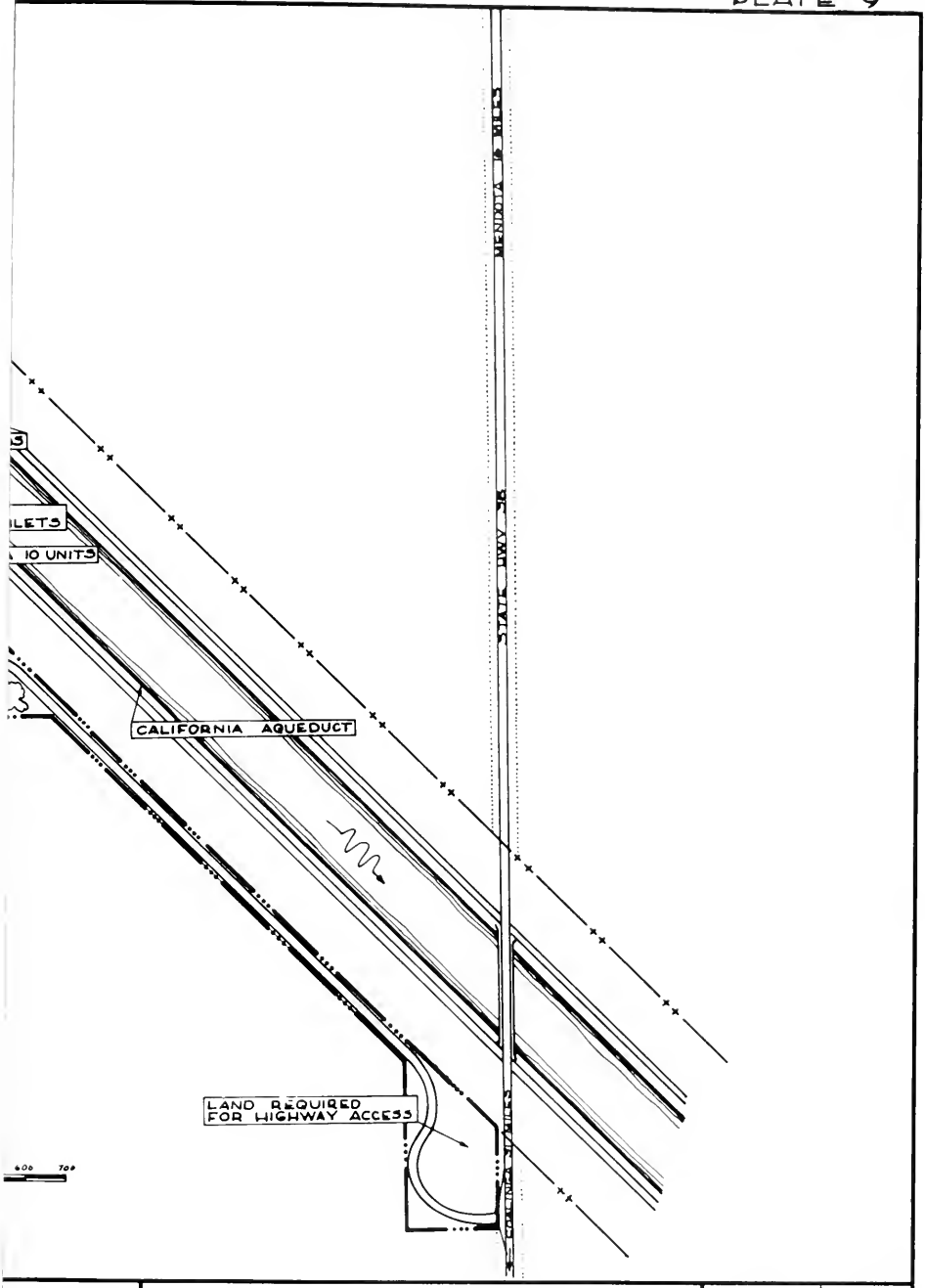
DEPARTMENT OF PARKS AND RECREATION

APPROVED _____ DEPUTY CHIEF DIVISION OF BEACHES AND PARKS

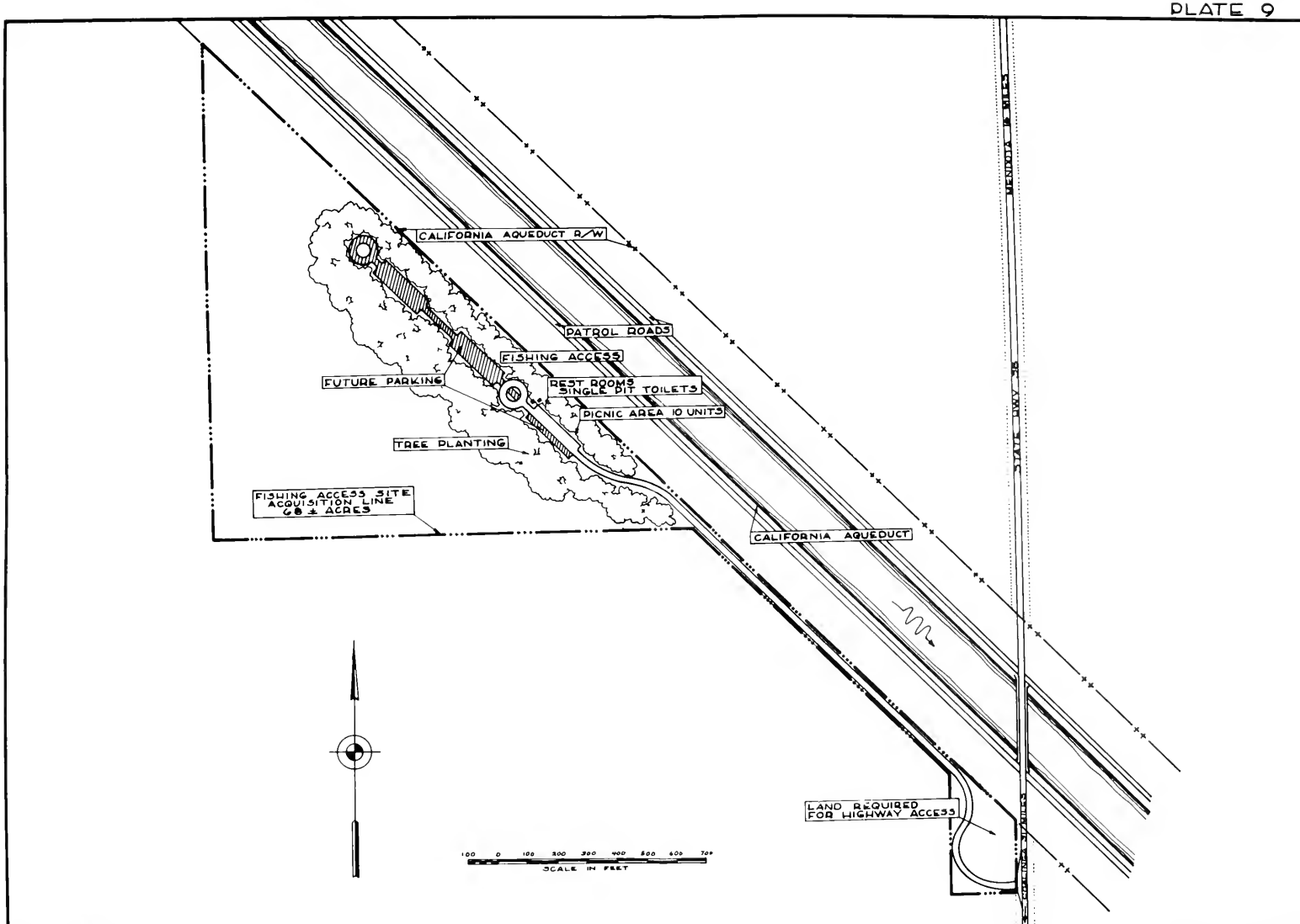
DATE _____

RECREATION SITE STUDY HURON FISHING ACCESS SITE DEVELOPED AREA PLAN

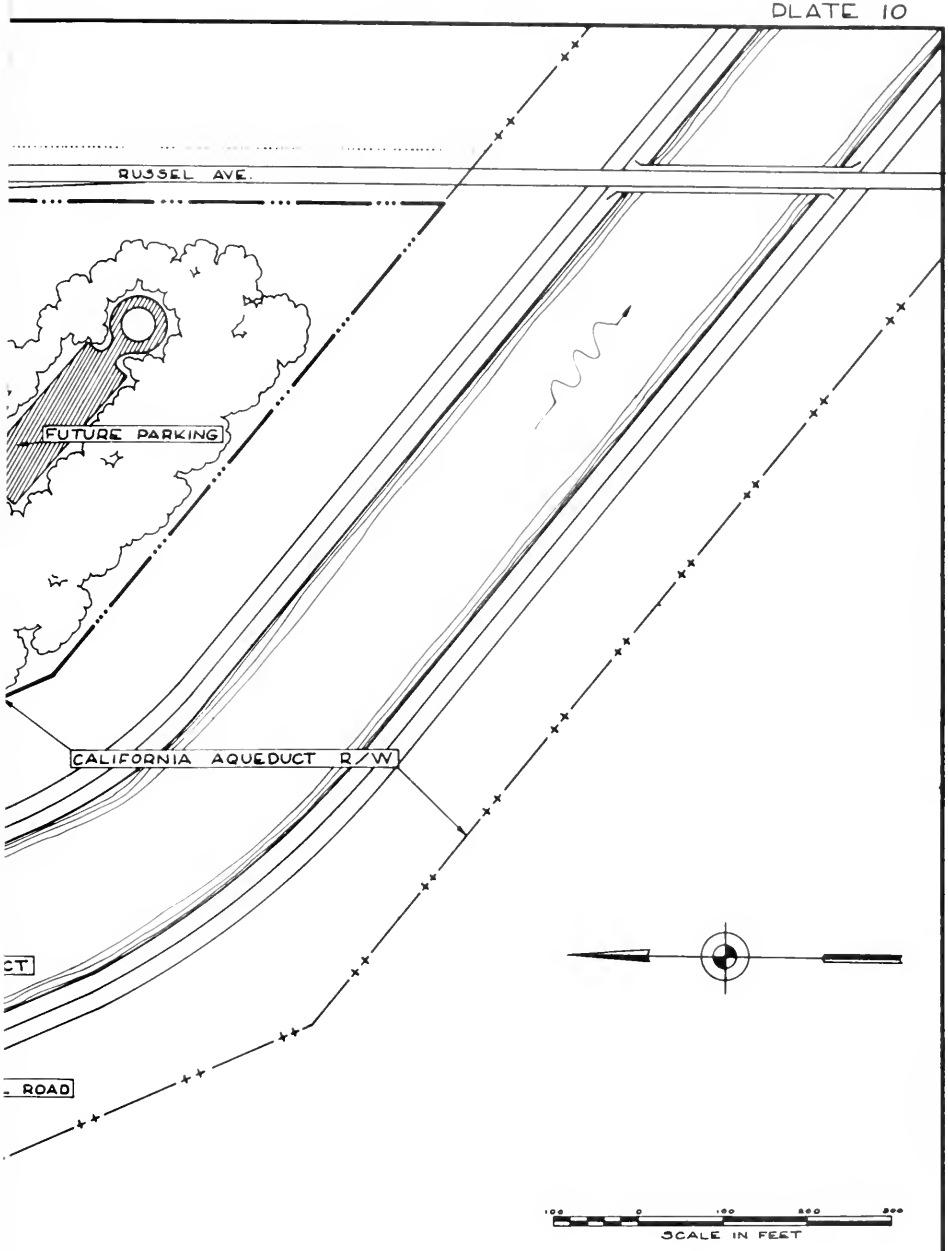
DRAWING NO.	SHEET
FILE NO.	OF
DISTRICT	



IIA D PARKS ON DATE	RECREATION SITE STUDY THREE ROCKS FISHING ACCESS SITE DEVELOPED AREA PLAN	DRAWING NO. FILE NO. DISTRICT	SHEET OF

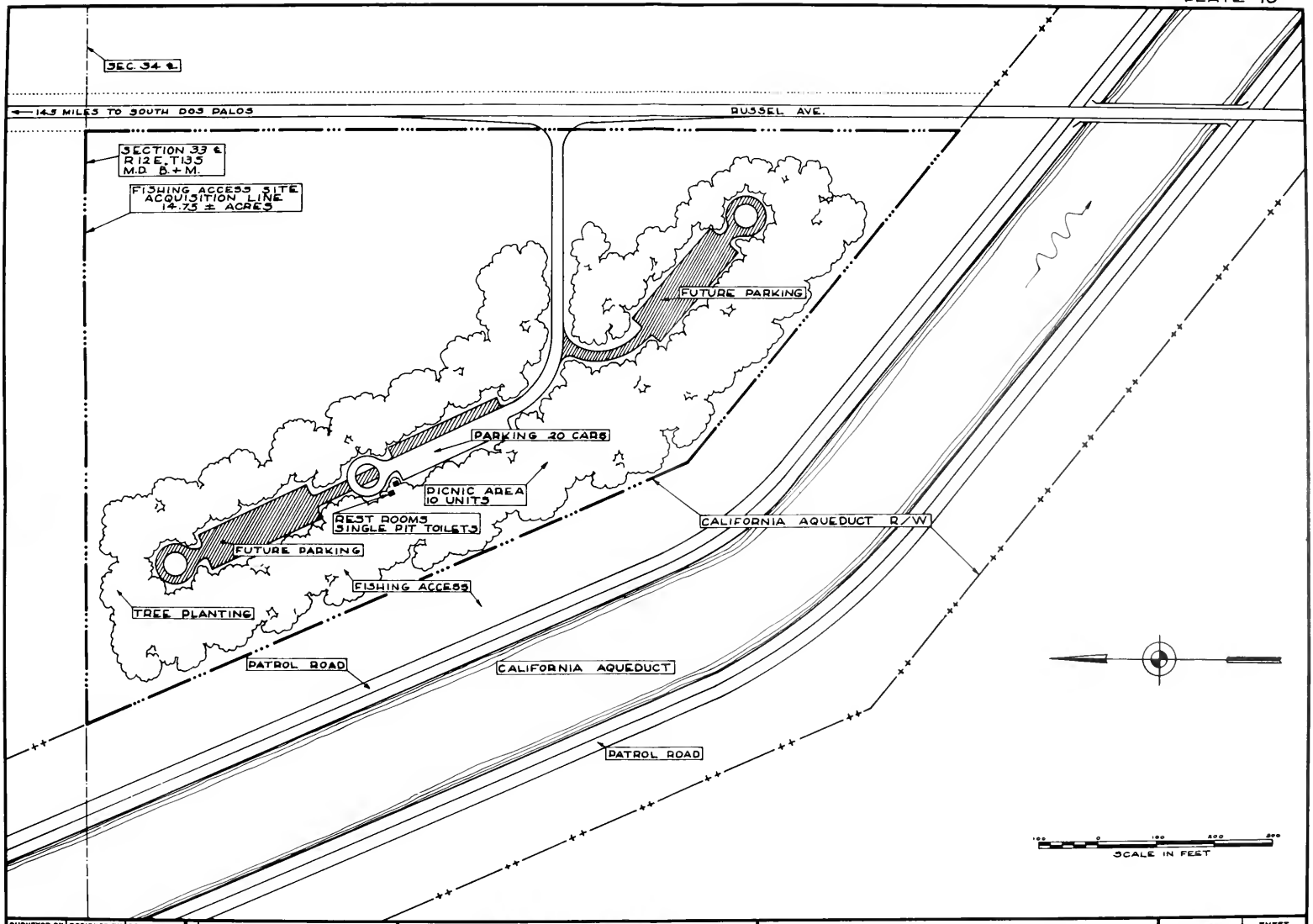


SURVEYED BY	DESIGNED BY	REVIEWED BY			THE RESOURCES AGENCY OF CALIFORNIA **DIVISION OF BEACHES AND PARKS** DEPARTMENT OF PARKS AND RECREATION	RECREATION SITE STUDY THREE ROCKS FISHING ACCESS SITE DEVELOPED AREA PLAN	DRAWING NO.	SHEET
DATE	DATE	DATE		DATE			FILE NO.	OF
TRACED BY	DRAWN BY C. Dewey	REVIEWED BY		DATE			DISTRICT	
DATE	DATE 7-18-84	DATE		DATE				
CHECKED BY	CHECKED BY	REVIEWED BY		DATE	APPROVED DEPUTY CHIEF DIVISION OF BEACHES AND PARKS DATE			
DATE	DATE 7/17/84	DATE						



NIA ND PARKS ION DATE	RECREATION SITE STUDY ORO LOMA FISHING ACCESS SITE DEVELOPED AREA PLAN	DRAWING NO. FILE NO. DISTRICT	SHEET OF

PLATE 10



SURVEYED BY	DESIGNED BY	REVIEWED BY
DATE	DATE	DATE
TRACED BY	DRAWN BY	REVIEWED BY
DATE	DATE 2/1/64	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE 2/13/64	DATE

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THE RESOURCES AGENCY OF CALIFORNIA

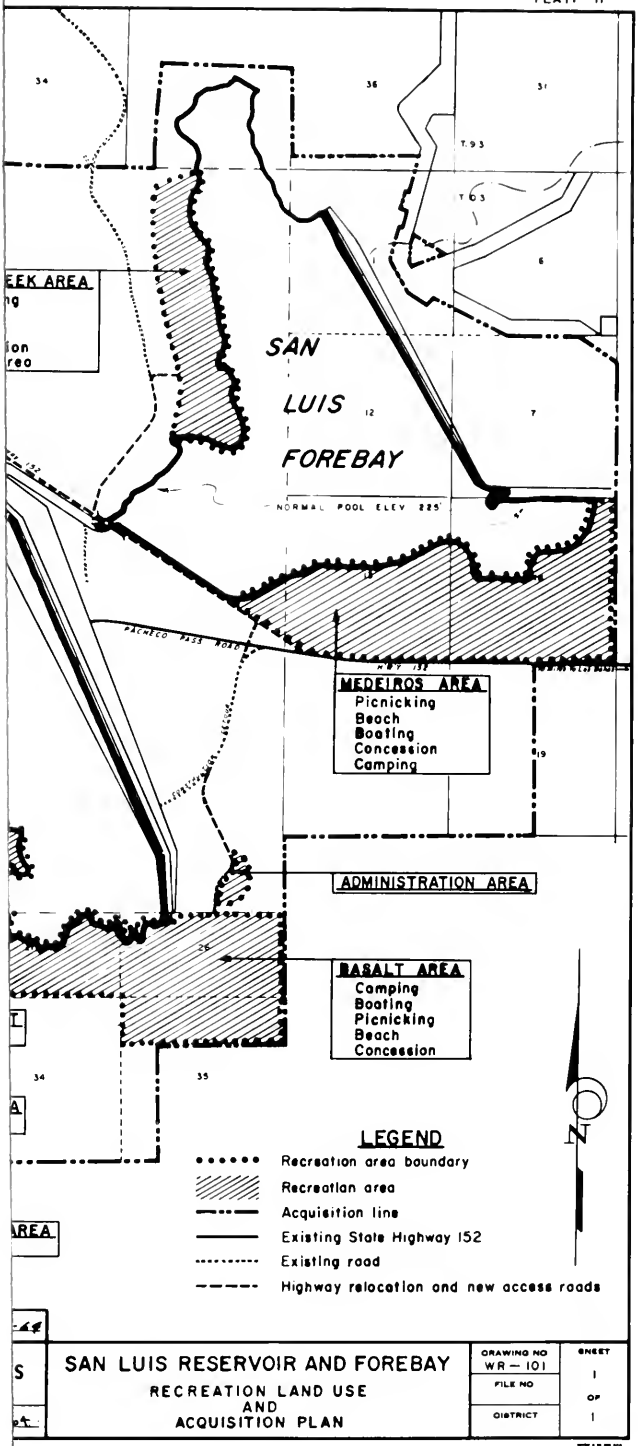
DIVISION OF BEACHES AND PARKS

DEPARTMENT OF PARKS AND RECREATION

APPROVED _____ DEPUTY CHIEF DIVISION OF BEACHES AND PARKS DATE _____

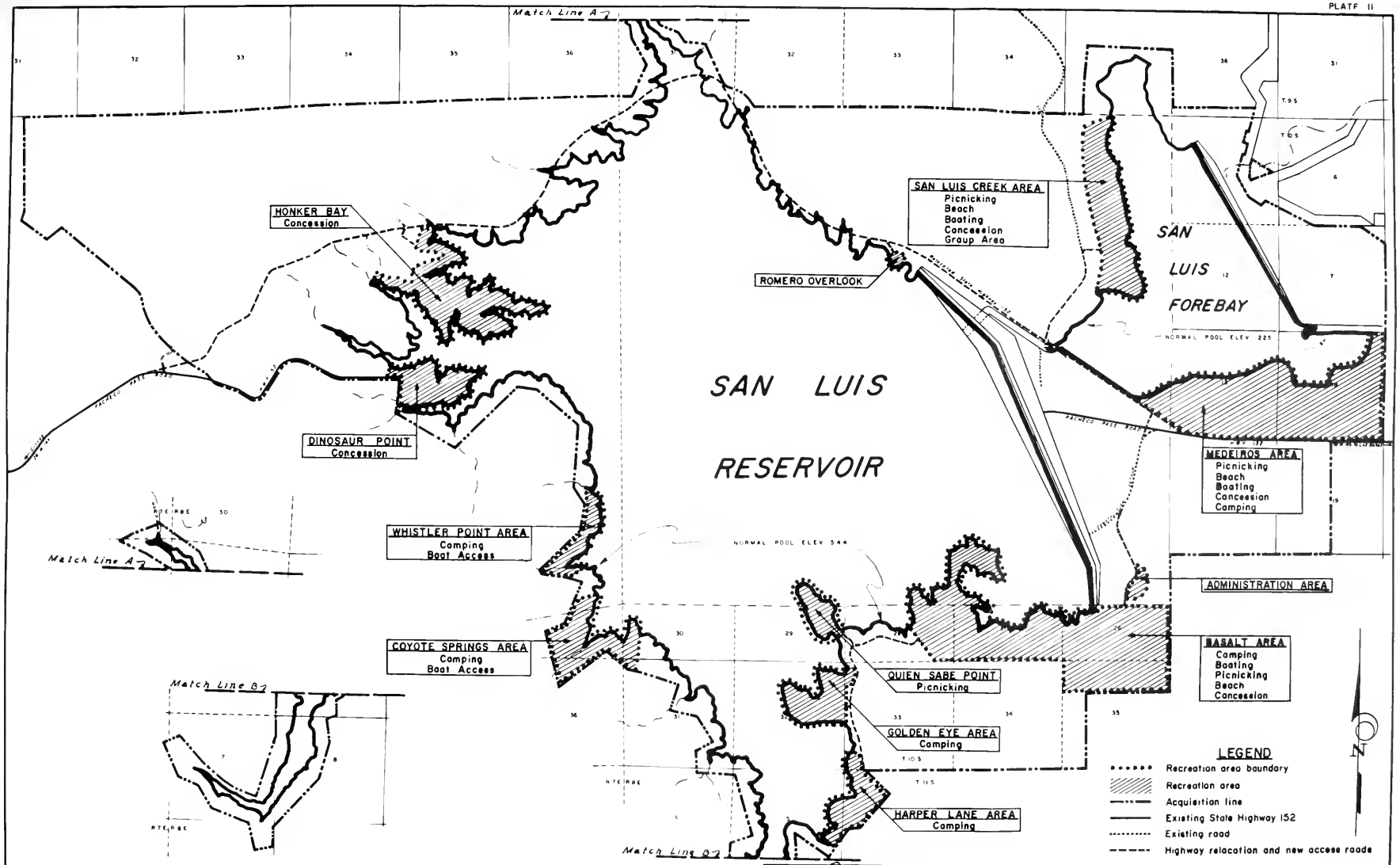
RECREATION SITE STUDY
ORO LOMA FISHING ACCESS SITE
DEVELOPED AREA PLAN

DRAWING NO.	SHEET
FILE NO.	OF
DISTRICT	



SAN LUIS RESERVOIR AND FOREBAY RECREATION LAND USE AND ACQUISITION PLAN	DRAWING NO WR—101	SHEET 1
	FILE NO	OF
	DISTRICT	1

PLATE II



REVISIONS	BY	DATE

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SURVEYED BY	DESIGNED BY	REVIEWED BY
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TRACED BY	DRAWN BY	REVIEWED BY
DATE	Smith DATE 6-10-64	DATE
CHECKED BY	CHECKED BY ANC	REVIEWED BY
DATE	DATE 11-64	DATE

Wm J Hauslein 6-11-64

James Ellsworth 6-11-64

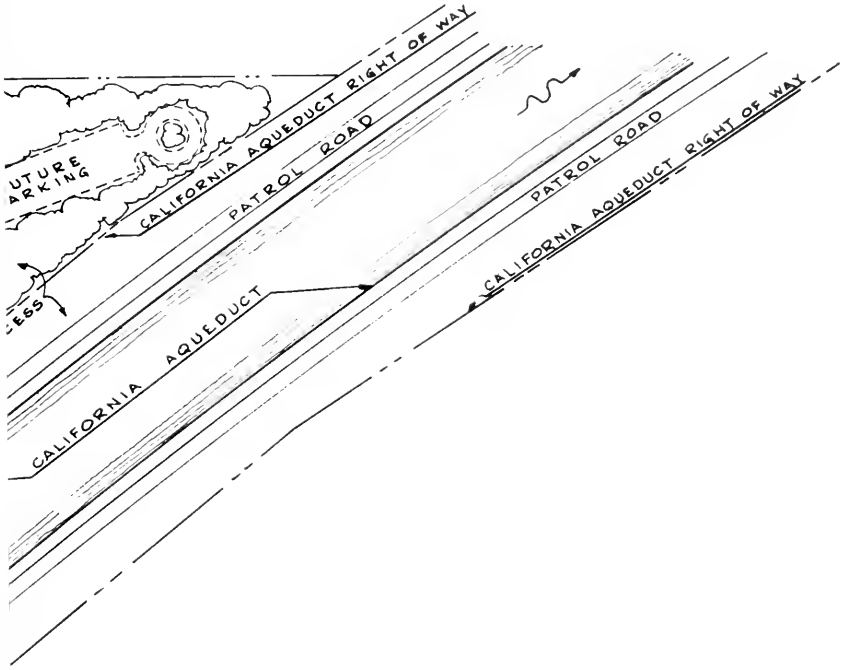
APPROVED ..... DATE 6-12-64
DIRECTOR, DEPARTMENT OF PARKS AND RECREATION

RESOURCES AGENCY OF CALIFORNIA
DIVISION OF BEACHES AND PARKS
DEPARTMENT OF PARKS AND RECREATION

APPROVED Edward G. Dobler DATE 6/12/64
CHIEF, DIVISION OF BEACHES AND PARKS

SAN LUIS RESERVOIR AND FOREBAY
RECREATION LAND USE AND ACQUISITION PLAN

DRAWING NO	SHEET
WR-101	1
FILE NO	OF
DISTRICT	1



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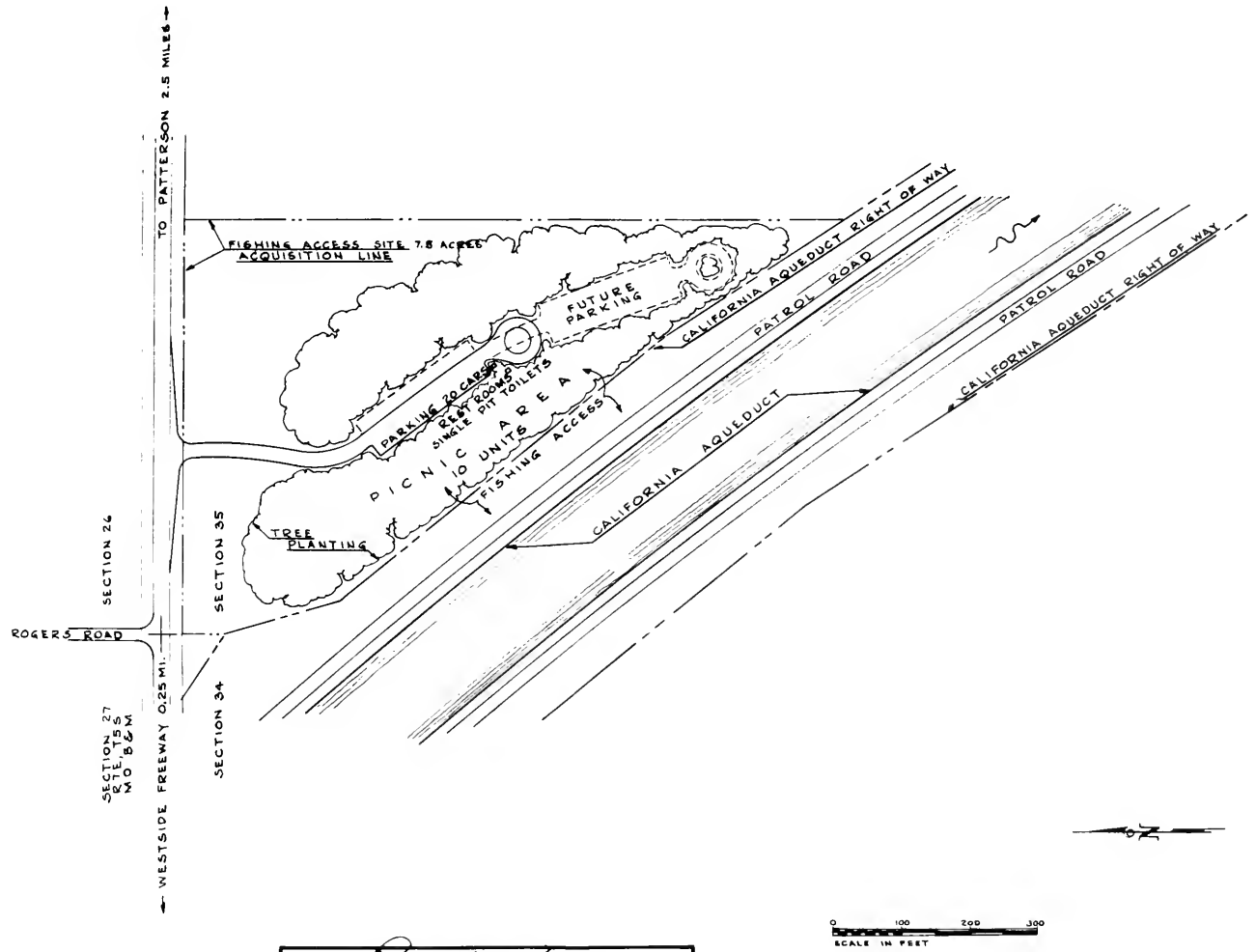
DATE 7/9/64

CALIFORNIA AQUEDUCT
SPERRY ROAD FISHING ACCESS SITE
STANISLAUS COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO.	SHEET
WR-104	1
FILE NO.	OF
DISTRICT	1



APPROVED [signature] DATE 7-3-64
DIRECTOR, DEPARTMENT OF PARKS AND RECREATION

THE RESOURCES AGENCY OF CALIFORNIA
DIVISION OF BEACHES AND PARKS
DEPARTMENT OF PARKS AND RECREATION

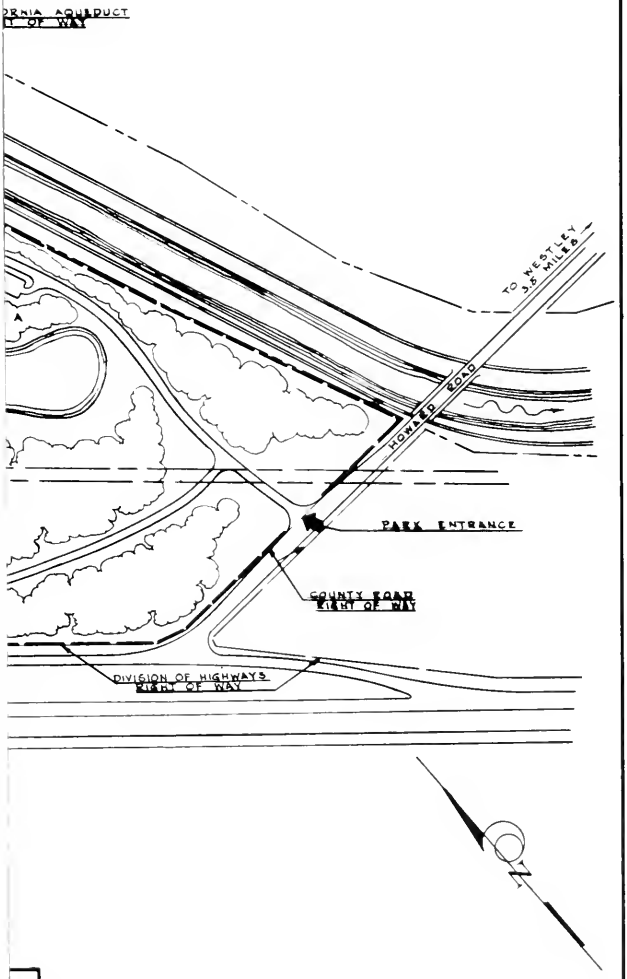
APPROVED [signature] DATE 7/9/64
CHIEF, DIVISION OF BEACHES AND PARKS

SURVEYED BY	DESIGNED BY	REVIEWED BY
DATE	H. LANG DATE 4-64	DATE
TRACED BY	DRAWN BY	REVIEWED BY
DATE	H. LANG DATE 4-64	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE	DATE

RECOMMENDED
Wm J Haussler DATE 7-2-64
[signature] DATE 7-2-64
DATE

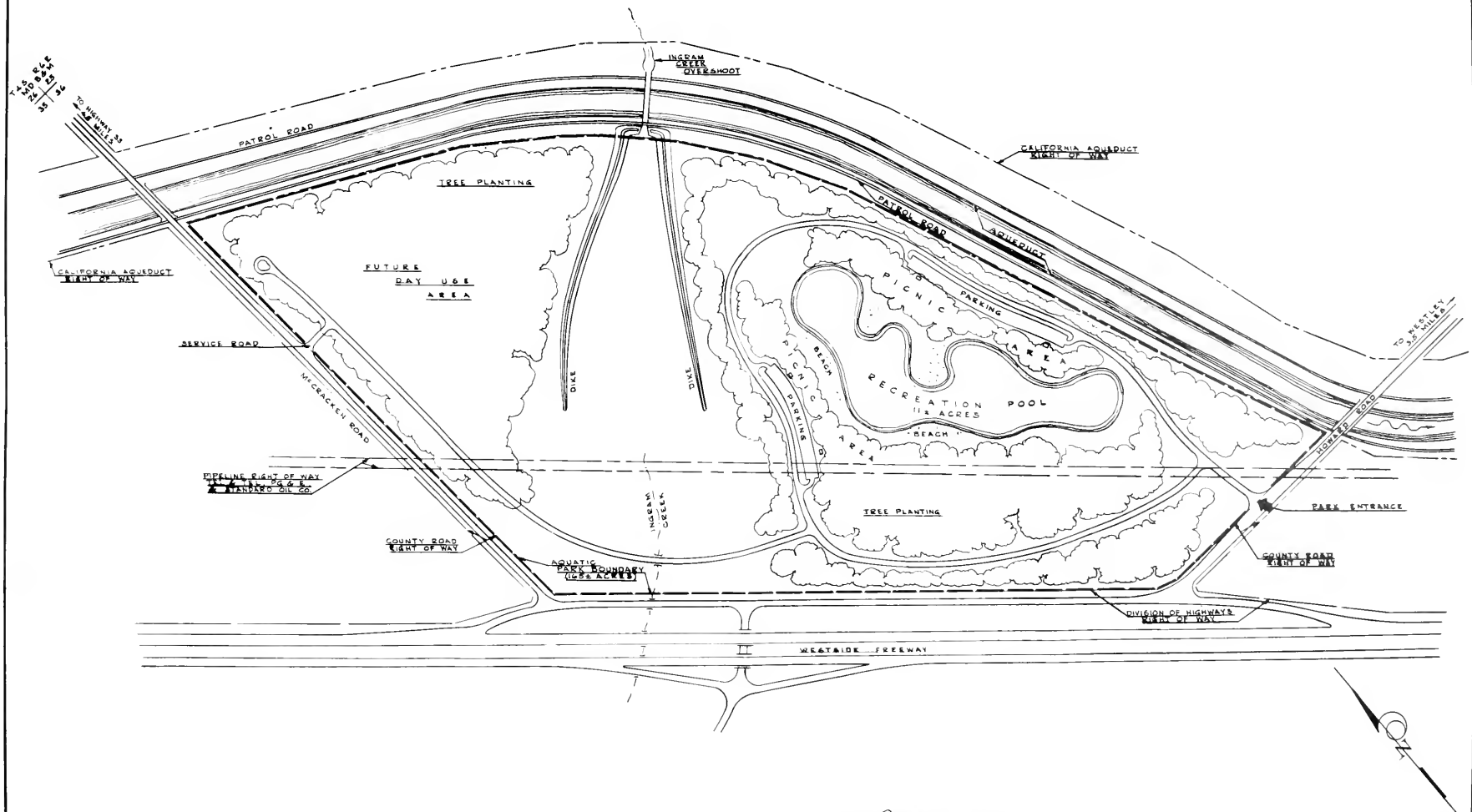
CALIFORNIA AQUEDUCT
SPERRY ROAD FISHING ACCESS SITE
STANISLAUS COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO. WR-104
FILE NO.
DISTRICT
SHEET 1 OF 1



CALIFORNIA AQUEDUCT
INGRAM CREEK AQUATIC RECREATION AREA
STANISLAUS COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO.	SHEET
WR-103	1
FILE NO.	OF
DISTRICT	1



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SURVEYED BY	DESIGNED BY	REVIEWED BY
DATE	H LANG DATE 8-64	DATE
TRACED BY	DRAWN BY H LANG	REVIEWED BY
DATE	DATE 8-64	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE	DATE

Wm J Hausler DATE 7-2-64

James E Warren DATE 7-2-64

DATE

APPROVED [signature] DATE 7-3-64
DIRECTOR, DEPARTMENT OF PARKS AND RECREATION

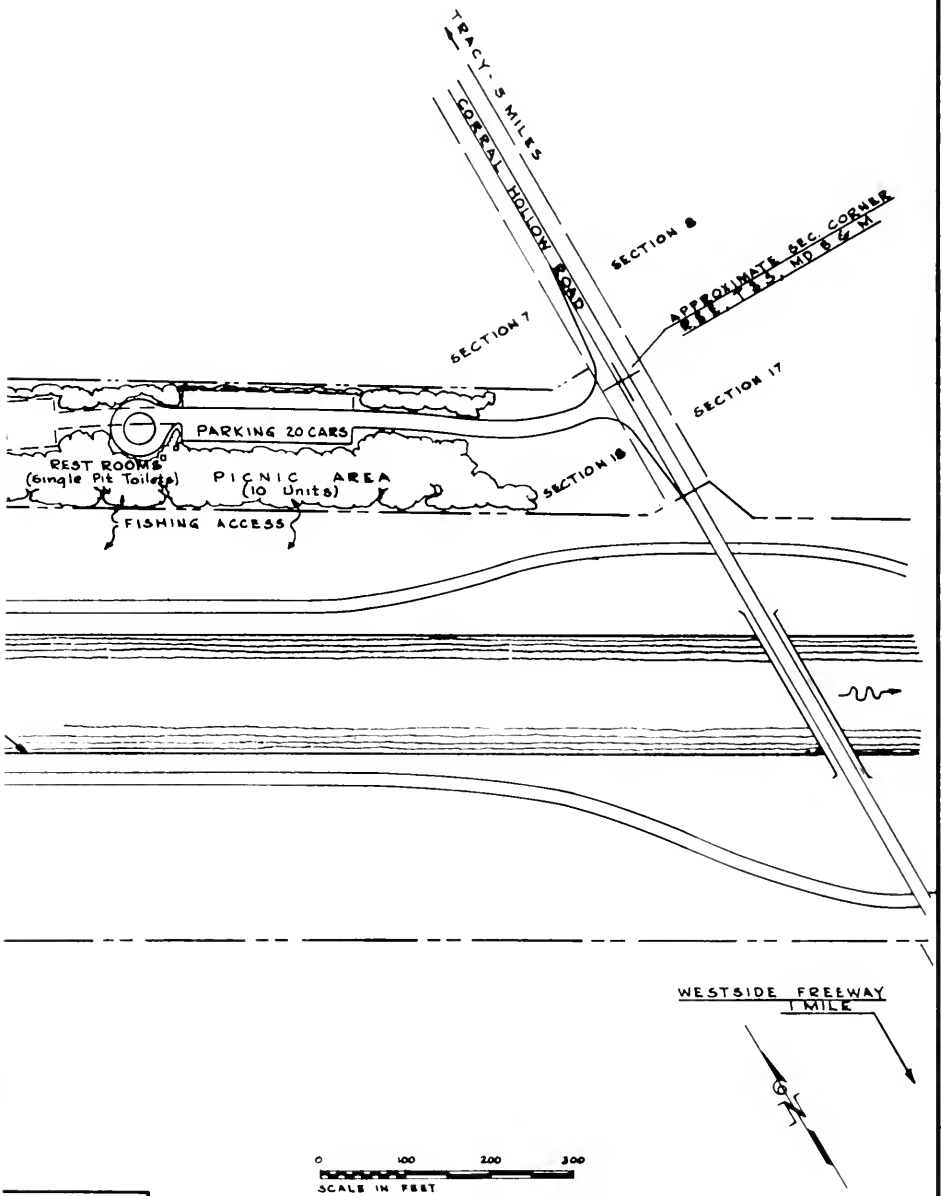
RESOURCES AGENCY OF CALIFORNIA
DIVISION OF BEACHES AND PARKS
DEPARTMENT OF PARKS AND RECREATION

APPROVED [signature] DATE 7/3/64
DIVISION OF BEACHES AND PARKS

CALIFORNIA AQUEDUCT
INGRAM CREEK AQUATIC RECREATION AREA
STANISLAUS COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO.	SHEET
WR-103	1
FILE NO.	OF
DISTRICT	1

PLATE 14



DATE 7-3-69

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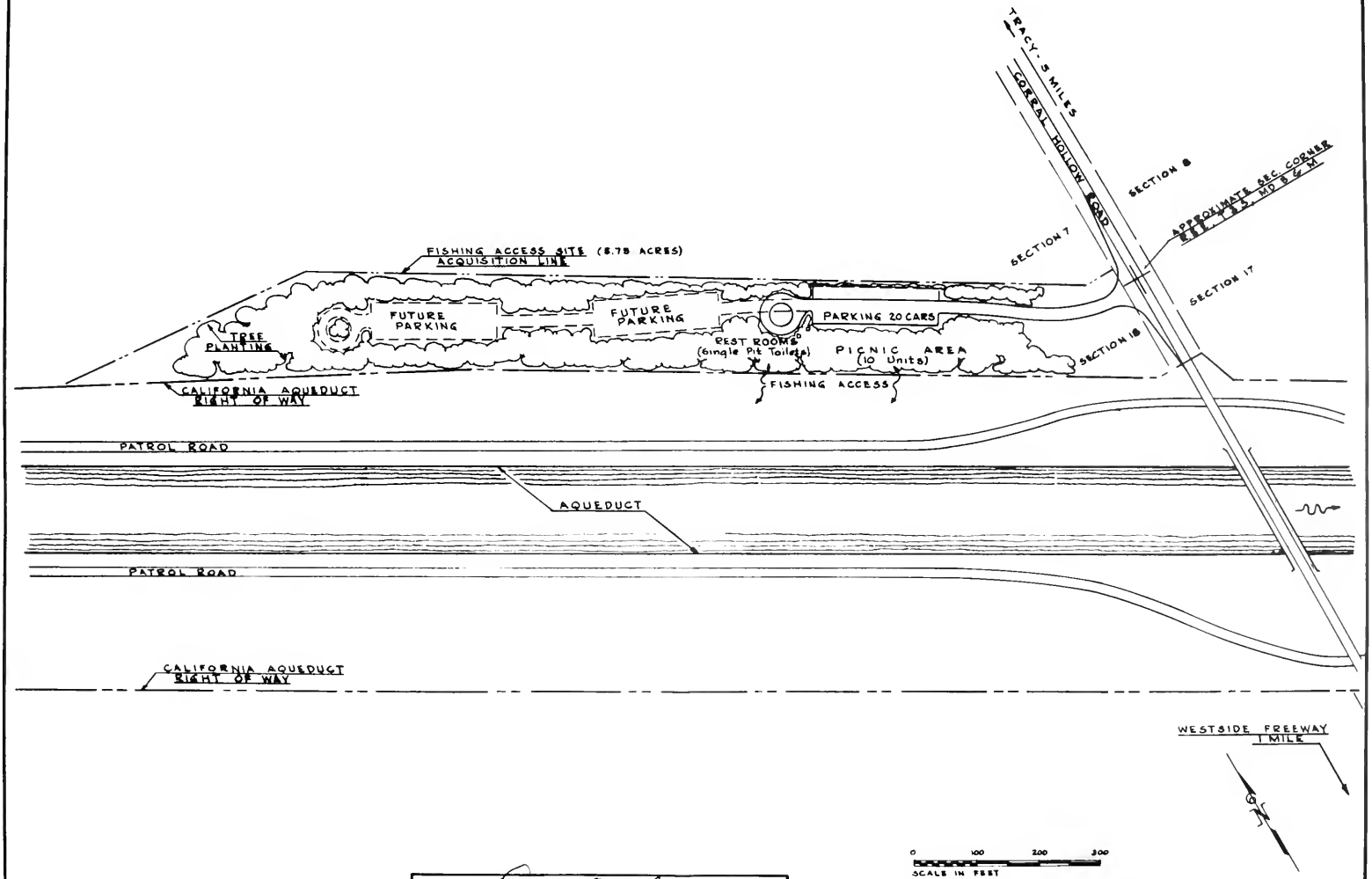
DATE 7/3/64

CALIFORNIA AQUEDUCT
CORRAL HOLLOW ROAD FISHING ACCESS SITE
SAN JOAQUIN COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO.	SHEET
WR-102	1
FILE NO.	OF
DISTRICT	1



SURVEYED BY	DESIGNED BY H LANG	REVIEWED BY
DATE	DATE 3-64	DATE
TRACED BY	DRAWN BY H LANG	REVIEWED BY
DATE	DATE 6-64	DATE
CHECKED BY	CHECKED BY	REVIEWED BY
DATE	DATE	DATE

Wm J Haussler DATE 7-2-64

James E Warren DATE 7-2-64

DATE

APPROVED [signature] DATE 7-3-64
DIRECTOR, DEPARTMENT OF PARKS AND RECREATION

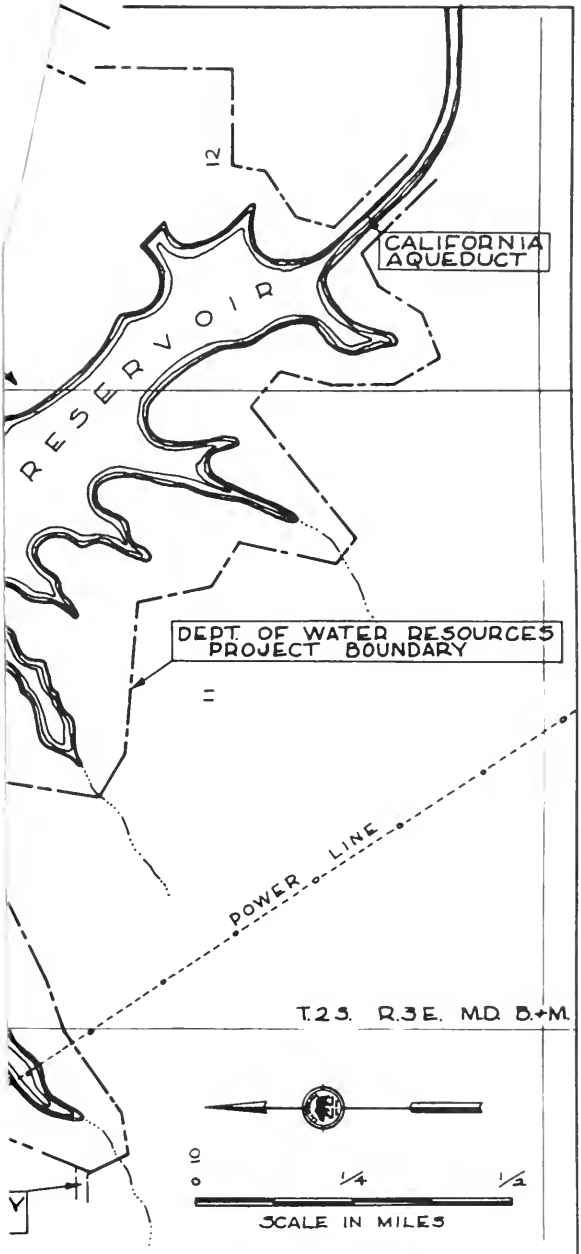
THE RESOURCES AGENCY OF CALIFORNIA
DIVISION OF BEACHES AND PARKS
DEPARTMENT OF PARKS AND RECREATION

APPROVED Edward F. Dolder DATE 7/3/64
CHIEF, DIVISION OF BEACHES AND PARKS

CALIFORNIA AQUEDUCT
CORRAL HOLLOW ROAD FISHING ACCESS SITE
SAN JOAQUIN COUNTY
LAND USE & ACQUISITION PLAN

DRAWING NO. WR-102	SHEET 1 OF 1
FILE NO.	
DISTRICT	

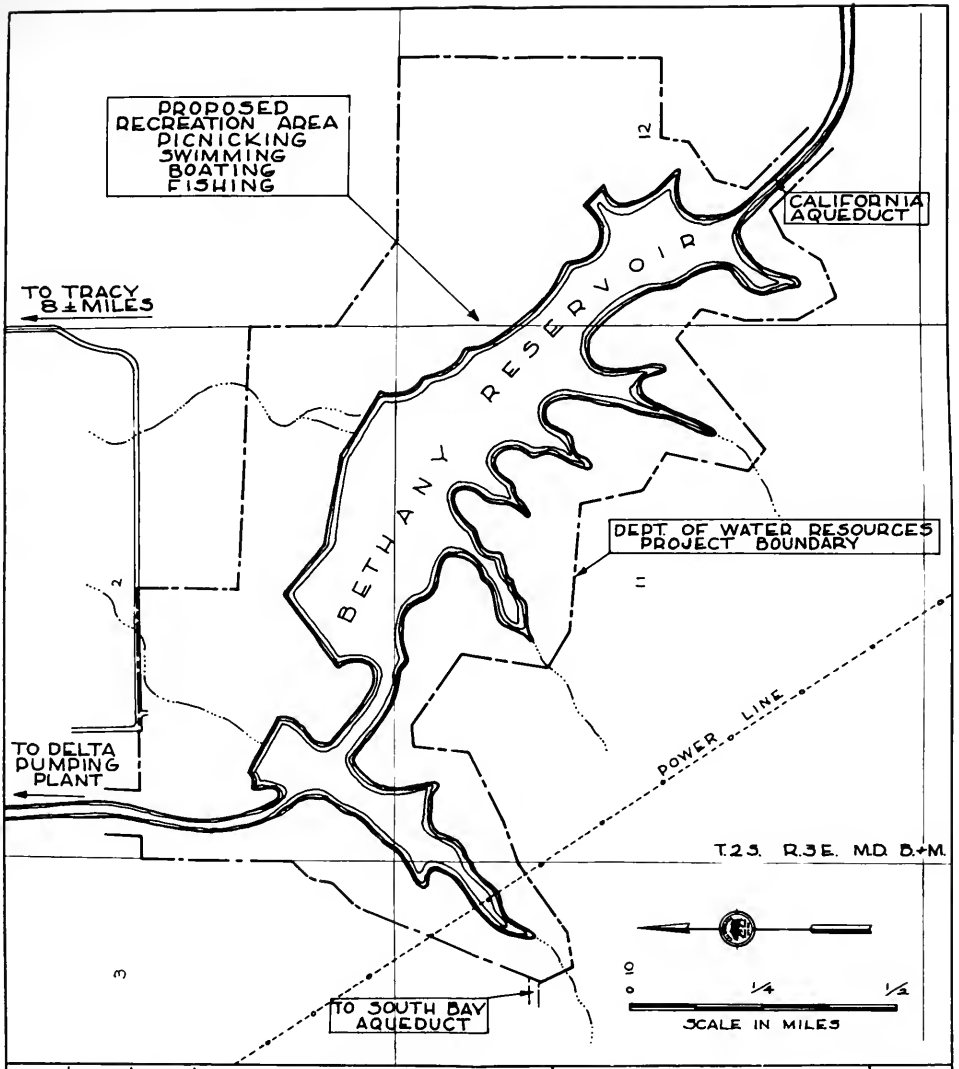
PLATE 15



ARKS ON RE	RECREATION SITE STUDY BETHANY RESERVOIR PROPOSED LAND USE	DRAWING NO SCALE DISTRICT

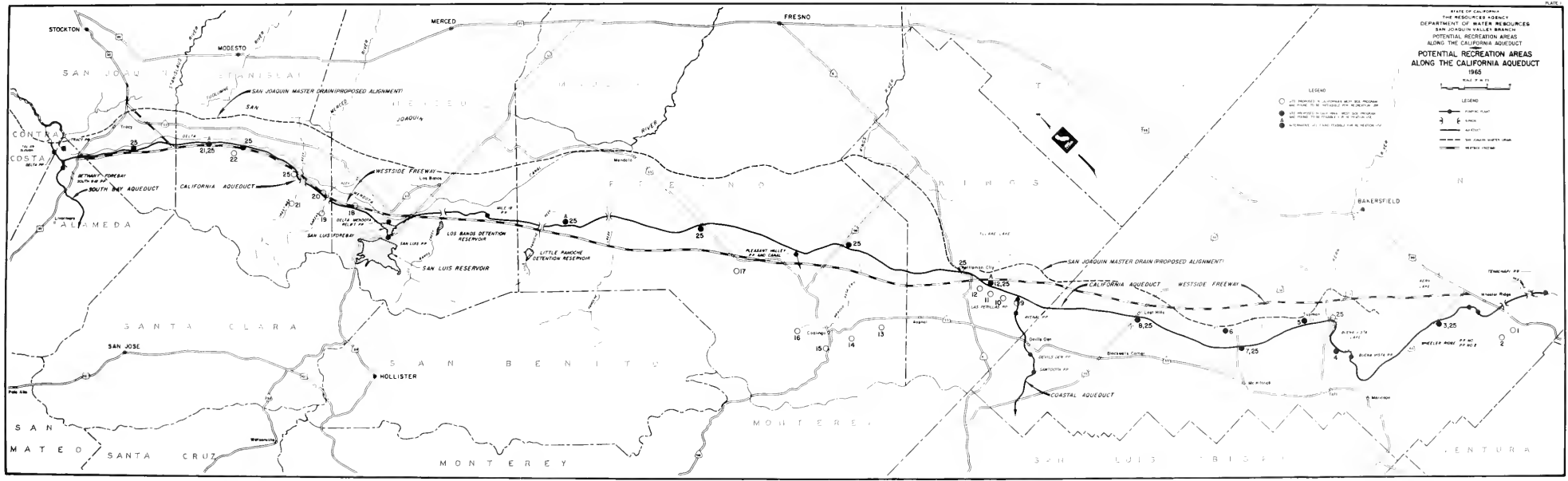
9767a 10-93 800 (1) BPO

PLATE 15



SURVEYED BY	DESIGNED BY	REVIEWED BY	STATE OF CALIFORNIA DIVISION OF BEACHES AND PARKS DEPARTMENT OF PARKS AND RECREATION	RECREATION SITE STUDY BETHANY RESERVOIR PROPOSED LAND USE	DRAWING NO.
DATE	DATE	DATE			SCALE
TRACED BY	DRAWN BY C. Dawey	REVIEWED BY			
DATE	DATE 8-19-46	DATE			DISTRICT
CHECKED BY	CHECKED BY	REVIEWED BY	APPROVED _____ DATE _____ DEPUTY CHIEF, DIVISION OF BEACHES AND PARKS		
DATE	DATE	DATE			

87872 10-45 500 ① SPO


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN VALLEY BRANCH
POTENTIAL RECREATION AREAS
ALONG THE CALIFORNIA AQUEDUCT
POTENTIAL RECREATION AREAS
ALONG THE CALIFORNIA AQUEDUCT
1965
LEGEND
STOCKTON
MODESTO
MERCED
FRESNO
BAKERSFIELD
SAN JOAQUIN MASTER DRAIN (PROPOSED ALIGNMENT)
CALIFORNIA AQUEDUCT
WESTSIDE FREEWAY
BETHANY FOREBAY
SOUTH BAY AQUEDUCT
DELTA MENDOTA PUMP PP
SAN LUIS FOREBAY
SAN LUIS RESERVOIR
LOS BANOS DETENTION RESERVOIR
LITTLE PANOCHE DETENTION RESERVOIR
PLEASANT VALLEY PP AND CANAL
TEHACHAPI PP
SAN JOSE
HOLLISTER
COASTAL AQUEDUCT
CONTRA COSTA
ALAMEDA
SANTA CLARA
SAN BENITO
SAN MATEO
SANTA CRUZ
MONTEREY
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